Proposed Rezoning
RE: Jamestown Quarry Development

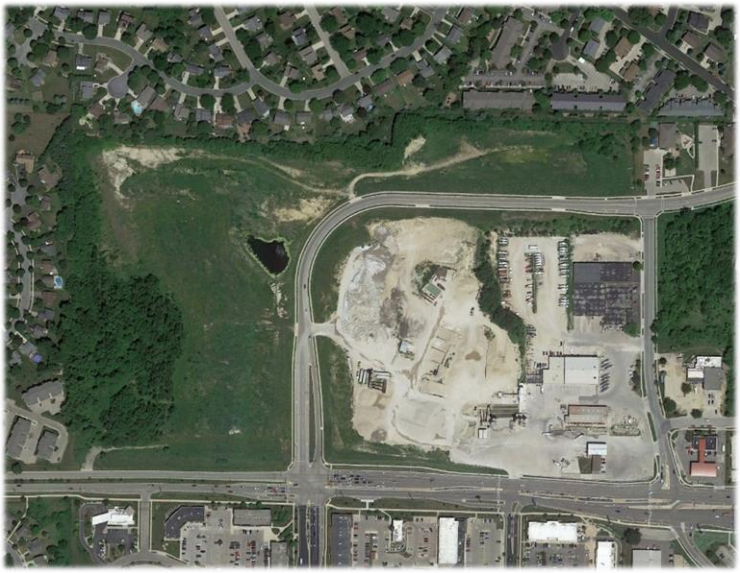
Fitchburg Partners, LLC is hereby requesting a rezoning of 32.596 acres of the parcel addressed as 2975 Kapec Road from a Rural Development Zoning District (R-D) to Planned Development Zoning District – General Implementation Plan (PDD-GIP).

This rezoning application is accompanied by an application for land division that proposes subdividing the property into seven (7) parcels, 6 of which are intended for commercial and residential development. Private utility mains, service laterals, access drives, and stormwater basins will be constructed in order to serve the various developments within the overall site.

A Public Information Meeting was held on April 18th, 2024 at the park shelter in Huegel Jamestown Park regarding the proposed land division and rezoning of lands formerly used by the Wingra Stone quarry operations. The meeting was well attended with approximately 20-30 area residents present along with the development team and representatives from the City of Fitchburg. Overall, those in attendance were in support of the proposed development and voiced their desire to see the entirety of the Wingra Stone site redeveloped.

This proposal to rezone the property and its subdivided parcels is consistent with the City's Comprehensive Plan and the City's Anton Drive Redevelopment Plan.

Jamestown Quarry
General Implementation Plan



Owner:
Fitchburg Partners, LLC
80 Ottawa Ave., Suite 410
Grand Rapids, MI 49503
Contact: Jeffrey A. Hundley
616-742-5200

Project Planner:
JSD Professional Services, Inc.
507 W. Verona Ave., Suite 500
Verona, WI 53593
Contact: Chris Dawson
608-893-0104

Submitted May 21st, 2024

OVERVIEW

The proposed Jamestown Quarry Development (JQD) will be a mixed-use development that will increase the supply and variety of commercial/retail options and create additional higher density housing opportunities within the City. The proposed development plan is aligned with the City of Fitchburg's Anton Drive Redevelopment Plan which, in part, envisions the eventual reclamation and repurposing of the existing Wingra Stone quarry site, which was partially reclaimed as part of the 2017 extension of Fitchrona Road. The JQD will redevelop approximately 33 acres of these historically quarried lands located north and west of Fitchrona Road on Fitchburg's northwest side.

Site Context

The development site is bordered by the Jamestown neighborhood to the north, the Orchard Pointe commercial district to the south, and the City of Madison's Maple Prairie Neighborhood to the west. The active Wingra Stone site and adjacent parcels (hereafter referred to as the "infield") are directly east of the development site and are expected to transition to mixed-use developments compatible with the JQD as future quarry operations diminish. Further context for the proposed site and its surrounding areas is provided in Appendix A.

Existing Site Conditions

The existing site has a wide range of elevations as a result of the historic quarry operations. A wooded ridgeline dominates the southwest portion of the site while the northeast corner of the site is comprised of a plateau-like topography. Between these elevated areas are gradually sloping fields (less than 10% in grade) that drain towards an existing sediment pond and Fitchrona Road. There are no observed wetlands or environmental corridors within the development site and the tree survey performed as part of the development planning process observed no heritage or specimen trees.

Rationale For a Planned Development District

In order to achieve the intended community benefits of the development, Planned Development District (PDD) Zoning is proposed to establish a framework for land use and site/building design within the JQD. PDD zoning will allow for the specification of architectural design, landscaping theme, and the overall aesthetic of placemaking within the mixed-use JQD as well as maintaining compatibility with adjoining neighborhoods.

The JQD is proposed to include a wide variety of potential land uses, some of which do not conform to the permitted uses of the City of Fitchburg's existing zoning districts. In some cases, PDD Zoning is the preferred mechanism to manage certain land uses until pending policy changes are approved and implemented. Overall, the desired dimensional standards, permitted land uses, and ability to control a consistent aesthetic appeal for development on the site is not achievable through traditional zoning and therefore, Planned Development District Zoning is proposed as part of this GIP.

Social and Economic Impacts

The Jamestown Quarry Development will have positive social and economic effects on the surrounding community. Upon complete buildout, the JQD will add 250-360 units to the Fitchburg housing market as well as a substantial increase for the City's commercial tax base.

Economic Impacts

The proposed development will replace vacant, underutilized land with dense residential housing and attractive commercial spaces that will represent approximately $70-90 million or more in added tax base for the City. By replacing vacant industrial lands with high-quality housing options and commercial amenities, the JQD will also provide economic benefits by increasing property values for surrounding parcels and attracting future uses to

the redevelopment of the Wingra Stone Infield – supporting and contributing to further substantial increases to the tax base.

Social Impacts

The JQD will provide quality residential and commercial amenities to support the surrounding neighborhood by replacing an otherwise vacant site with more productive land uses. The addition of this new neighborhood and community commercial center will attract new residents and visitors while also increasing employment opportunities in the area. It is anticipated that the JQD will encourage and expedite the redevelopment of the Wingra Stone infield, ultimately achieving the goals of the City's Anton Drive Redevelopment Plan.

Consistency with Comprehensive Plan

This proposed development is consistent with the goals, policies, and objectives of the City of Fitchburg's 2020 Comprehensive Plan. The JQD addresses many of the principles identified in the comprehensive plan through the provision of increased housing stock complemented by adjacent commercial land uses and direct connections to existing transportation and utility infrastructure. The JQD residential products in particular will incorporate innovative designs to add substantial housing units in spatially efficient building footprints. Mixed commercial and retail components of the development will address the community-identified desire for more entertainment options by providing expanded restaurant and retail options. Overall, this GIP submittal directly addresses the City's goal to promote in-fill development that revitalizes underutilized land within the existing urban service area.

Environmental Design and Benefits

Utilizing a Planned Development District Zoning for the Jamestown Quarry Development is environmentally beneficial because it provides a greater control over permitted density, dimensional, and architectural standards than what is allowed under traditional zoning districts. Through PDD zoning, individualized zoning standards can be created to efficiently utilize the available land while retaining sufficient flexibility to attract the targeted land users.

Land Use

Upon full buildout of the development area, the JQD will contain approximately 140,000-200,000 square feet of new commercial building space and between 250-360 new market rate housing units. Approximately 2-5 acres of dedicated public open space is included in the development area with the final acreage and dedicated use for this space being dependent on the end user(s) of Commercial Lot 1/Mixed-use Lot 1. Future amendments to the GIP will further define these public open spaces in conjunction with individual site development applications. At the time of this GIP submittal, the projected mix of residential unit types provided in the development is estimated to be:

1 Bedroom/Studio	60%
2 Bedroom	32%
3 Bedroom	8%

Each unit type will be available in a range of sizes and will serve a wide variety of prospective residents. All residential buildings will be 1-5 stories in height and all commercial buildings will be between 1-3 stories in height. One story residential and commercial buildings within the development will be required to have a higher façade presence to provide the appearance of a two story or "near-two story" structure.

Site Design and General Information

Two concept master plans for the Jamestown Quarry Development have been developed with careful consideration of the needs of the surrounding community and the City's intentions for future land use in the area.

Transportation

Improvements to the existing McKee Road and Fitchrona Road corridors will be incorporated into the JQD to provide functional access to the development without adverse effects to traffic flow in the surrounding area. Proposed pedestrian facilities included in the JQD plans will provide improved non-vehicular connectivity between the residential and commercial land uses both within the development itself and in the surrounding area. Further definition of the location of non-vehicular connections to the adjacent residential neighborhoods will be contingent upon the acquisition of necessary easements by the City of Fitchburg and City of Madison.

Stormwater Management

Stormwater management practices for the development will primarily include detention ponds that provide a combination of regional and site-specific runoff management and treatment. Where practical, these detention ponds will include proprietary devices that maximize water quality performance standards while minimizing the overall pond footprint, thereby maximizing the developable land area on the site. Due to the extensive deposits of fill material that occurred throughout the lifetime of the historic quarry, much of the development is exempt from infiltration standards, however, infiltration practices will be implemented to the extent possible where undisturbed native soil coincides with the desired location of stormwater treatment devices.

Areas downstream of the development such as along Kapec Road and King James Way experience periodic flooding during large rain events, therefore stormwater discharge from the proposed development must be limited so as not to exacerbate these flooding hazards. As individual parcels develop, Fitchburg Public Works staff and other city officials will continue to be consulted to monitor whether additional measures will be required to supplement the proposed regional ponds.

Utilities

Private sanitary sewer main and water main serving the smaller commercial lots will be installed with the proposed commercial access road and will connect to available facilities on Fitchrona Road. Further private sanitary and water connections serving the large commercial and residential sites will be installed as extensions of existing stubbed laterals. The installation of water loops and private fire hydrants will follow the guidance of the Fitchburg Utility District and the requirements of applicable fire codes.

Landscaping and Environmental Considerations

As part of the planning and design process, the development team conducted a tree survey to identify "desirable trees" as defined by City ordinances. The survey did not reveal any desirable trees on the site and the majority of trees observed were invasive and low quality. The JQD will require the removal of the majority of these invasive trees to accommodate circulation routes and building pads. Efforts to replace and expand the on-site tree canopy with desirable trees will be encouraged to the extent possible throughout the landscaping of individual sites. All other landscape improvements within the JQD will be required to meet the City's minimum landscape standards.

An overall landscape buffer is conceptually planned to provide visual screening of the JQD for the Jamestown Neighborhood to the north. This buffer will broadly require coniferous plantings and fencing that can provide year-round screening for the neighborhood.

Zoning Standards

The following standards shall be adhered to within the Jamestown Quarry Development:

Permitted Uses

(1) Office Activities.
   a. Professions including health services, office or clinic basis. (801—804)
   b. Finance, real estate, insurance. (60—67, except for convenience cash business)
   c. Government offices. (91—96)
   d. Business offices. (89)
   e. Business services including convenience printing, excluding services to buildings. (73 except 734)
   f. Educational services, provided all activities are enclosed within buildings. (82)
   g. Legal services. (81)
   h. Business and Professional Associations. (861—862)
   i. Medical and dental laboratories. (807, 808, 809)

(2) Commercial Activities.
   a. Variety stores; hardware stores. (525, 53)
   b. Building and lumber supplies and services. (52)
   c. Animal Hospital and kennel. (074-075)
   d. Food stores. (54)
   e. Grocery stores. (541)
   f. Gas sales associated with a convenience store.
   g. Auto accessory stores (completely enclosed). (553)
   h. Car and truck wash. (754)
   i. Gas station (classes I, II and III); minor automobile repair, associated with a gas station. (554)
   j. Apparel and accessory stores. (56)
   k. Furniture; home furnishings and equipment. (57)
   l. Drugstores. (591)
   m. Liquor stores. (592)
   n. Restaurants, all classes, drinking places. (58)
   o. Miscellaneous shopping goods. (594)
   p. Miscellaneous retail stores. (59, except 598 and secondhand business)
   q. Printing and publishing; photographic studio. (27, 722)
   r. Other personal services. (723, 724, 725)
   s. Business services. (73)
   t. Watch, clock and jewelry manufacture and repair. (763)
   u. Electrical, electronic, radio, television and related repairs. (762)
   v. Social services. (83)
   w. Dance, fitness and health centers.
   x. Miscellaneous services. (89)

(3) Residential
   a. Residential occupancy of dwelling unit structures having three to eight dwelling units.
   b. Residential occupancy of dwelling structures having greater than eight dwelling units.

c. Offices located within buildings that have three or more dwelling units, provided that the total area devoted to exclusive office usage including offices used for building or project management purposes, does not exceed 3,000 square feet in any building, and provided that only incidental retail sales are conducted within such offices.

Conditional Uses

(1) Office Activities
   a. Educational services, with activities outside building. (82)
(2) Commercial Activities
   a. Greenhouses, nurseries and landscaping sales and services. (018, 078)
   b. Amusement and recreation services. (79) and motion picture theatres (783), including retail sales of sporting goods practiced in association with the recreational services.
   c. Wireless communication facilities.
   d. Hotels and motels. (701)
   e. Light manufacturing, assembly and warehousing, accessory and incidental to a permitted or conditional use, which may exceed 30 percent but no more than 45 percent of the total use by floor space.
   f. Outdoor/display. Permanent or long-term seasonal outdoor storage or display of sales merchandise.
(3) Residential
   a. Cooperative housing.

Minimum Dimensional Standards

	Residential	Commercial
Front Street Setback	30’	20’
Side Setback	10’	10’
Side Street Setback	20’	15’
Rear Setback	25’	10’
Open Space	60%	15%
Building Height	1.5 stories	1.5 stories

Building Height Maximum

Residential: The lesser of 5 stories or 62’
Commercial: The lesser of 3 stories or 42’

Heights above these limits are subject to conditional approval.

Placemaking Strategies

In compliance with the goals of the Anton Drive Redevelopment Plan, the following guidelines shall be adhered to for sites within the Jamestown Quarry Development:

(1) Building entrances should be connected to the public sidewalk by an attractive and accessible path/walkway.
(2) Parking should be located in the side yard, within the overall building footprint, or generally in a location separated from public right of way by buildings themselves. A buffer should be provided between parking lots and adjoining streets using landscaping and/or decorative wall/fencing two to four feet in height.

(3) Bicycle parking facilities are highly encouraged.
(4) Parking lots with rows of more than fifteen (15) parking spaces should be interrupted by a landscaped median or island.
(5) Parking lots should be landscaped along their edges and within each parking island. The incorporation of required stormwater detention and infiltration devices into the design of the parking area is encouraged.
(6) Pedestrian walkways should be provided in parking areas to allow safe access to building entrances.
(7) Preferred sign types include building-mounted and free-standing monument signs that are consistent with building designs in color and material.
(8) Exterior lighting should generally be mounted above the lighted surface and directed toward the ground, to limit light pollution and otherwise comply with City lighting requirements.
(9) The facades of buildings should be finished with an aesthetically pleasing material(s) such as masonry, natural/cultured stone, wood, glass panels or ornate masonry materials.
(10) All building materials should be durable and of high quality.
(11) Landscaping should follow the general plant list provided in Appendix G.

Property Management

The on-going management and maintenance of areas within private lot boundaries will be the responsibility of site owners. Maintenance of pedestrian areas, sidewalks, stormwater management facilities, utilities, etc. within the development and along the public streets will be the responsibility of the developer, association or private lot owner. The maintenance of the multi-use trails in the right-of-way of the public streets and within the dedicated public open space of the site after the developer installs them will be the responsibility of the City. A Developer's Agreement will be negotiated with the City to establish the assignment of these responsibilities.

Development Timeline

It is estimated that a complete buildout of the Jamestown Quarry Development may take three to five years. Construction of the internal commercial access road, installation of utilities to serve the various users of the planning area, and mass grading on the site is anticipated to begin within one year of adoption of this GIP. This construction will also include the public right of way improvements necessary to properly serve the overall development.

The commercial lots along McKee Road are expected to be the first tenants to improve on the site and will proceed immediately following the installation of the access road and utilities serving each lot. The multifamily development in the northeast of the JQD site is anticipated to begin construction within one to two years of the adoption of the GIP. The final phase of development for the site will be associated with the 19-acre mixed retail/residential lot, which is anticipated to begin construction within three to five years of the GIP approval.

Summary of Neighborhood Input

Public engagement has been, and will continue to be, incorporated into the planning and design of the Jamestown Quarry Development. The development team has worked closely with City Staff, Alders, and neighborhood representatives in the preparation of the materials included in this GIP. Prior to this submittal, public input was sought at a neighborhood meeting held on Thursday April 18th at the park shelter in Huegel Jamestown Park with approximately 20-30 area residents in attendance. The overall comments and questions raised by attendees during the meeting are generally summarized below:

Q: What is the anticipated timeline for development?
A: The first phases of construction are anticipated to begin by the end of 2024 with a full buildout of the planning area occurring within the next 3-5 years.

Q: What landscaping buffers will be provided to aid in visual screening and mitigation of dust from the active Wingra Stone operating plant?
A: A variety of landscaping berms are included in' the proposed development plans including extensive plantings of coniferous trees to provide visual screening year-round. These trees will also aid in trapping airborne dust sourced from the Wingra Stone concrete plant.

Q: Will improvements be made to drainage from the site?
A: The development team has coordinated closely with Fitchburg Public Works to meet capacity restrictions for stormwater runoff in the area. Drainage to City of Madison parcels will be limited so as to not exacerbate the known structural flooding concerns in the area.

Q: What type of housing is being proposed?
A: Market rate housing is proposed for all residential development on the site.

Overall, those in attendance were in support of the proposed development plan and voiced their enthusiasm for the long-term goal of a less industrious land use in the area. Public involvement will continue to be incorporated into the planning process and throughout the development of the individual lots.

APPENDIX A - SITE CONTEXT MAP

April 4, 2024

1:8,000

0 0.05 0.1 0.2 mi

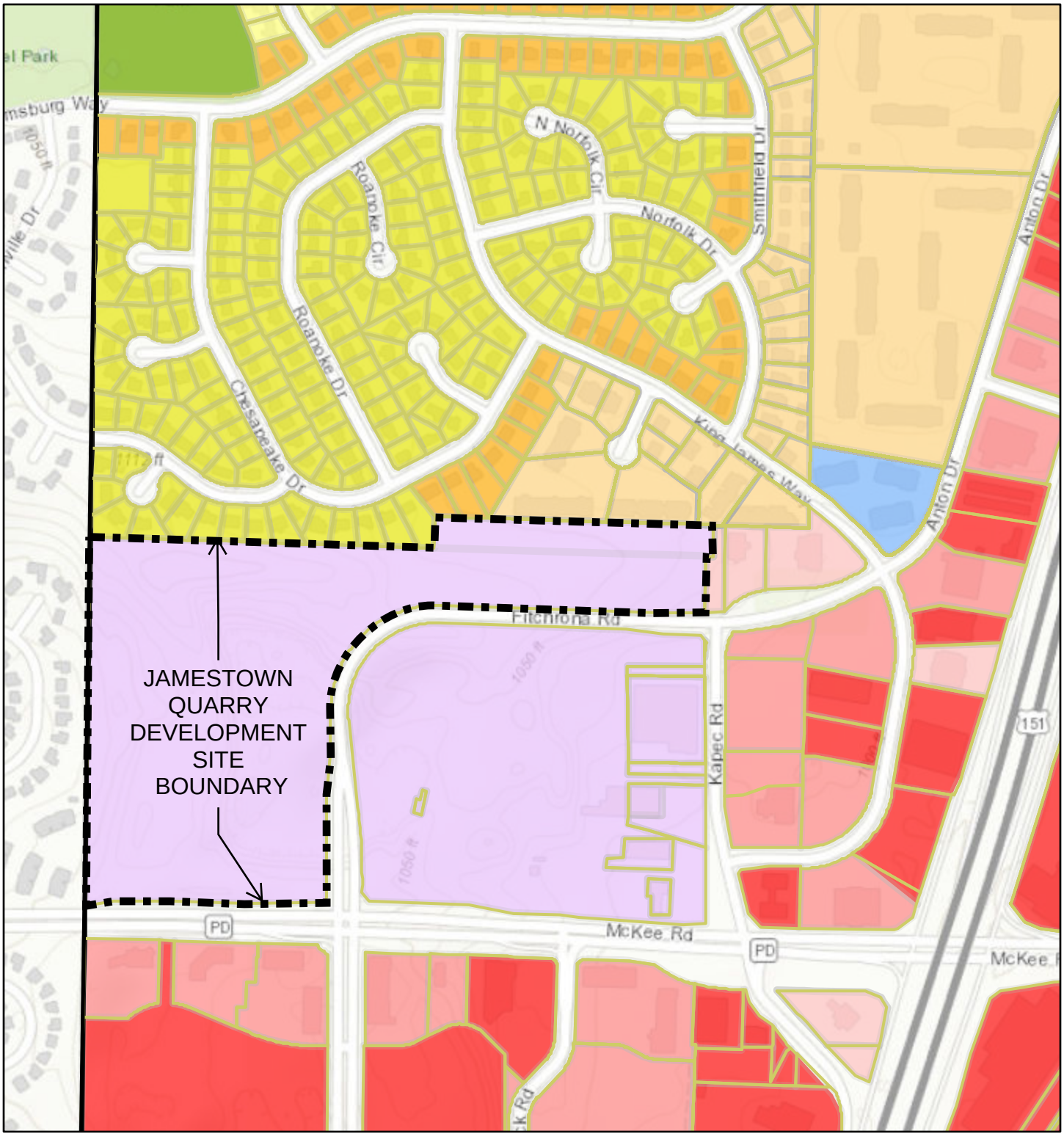
0 0.1 0.2 0.4 km

Parcels

Municipalities

*If approved, current CDP will require amendment when Wingra Stone operating plant and adjacent parcels are re-developed. There are no development plans for these parcels at this time.

APPENDIX B - EXISTING ZONING MAP



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0 270 540 1,080 ft

0 80 160 320 m

Zoning

- Low Density Residential
- Planned Development District - Specific Implementation Plan
- Low to Medium Density Residential
- Former R-4 Residential
- Medium Density Residential
- Park and Recreation
- General Business
- Rural Development
- Highway Business
- Professional Business
- No Value
- Parcels
- City Limits

County of Dane, Esri Canada, Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA

Web AppBuilder for ArcGIS

County of Dane, Esri Canada, Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA | Tyler Tomaszewski

JAMESTOWN NEIGHBORHOOD

MAPLE PRAIRIE NEIGHBORHOOD

EX. SEDIMENT POND

DRAINAGE DIRECTION, TYP.

WATERSHED BOUNDARY, TYP.

WINGRA STONE

FITCHRONA ROAD

KAPEC ROAD

MCKEE ROAD

ORCHARD POINTE

JAMESTOWN QUARRY DEVELOPMENT

FITCHBURG, WI 04.18.2024

EXISTING CONDITIONS

APPENDIX C

NORTH

0 60' 120'

JSD

APPENDIX D - FUTURE LAND USE MAP

4/4/2024, 11:18:48 AM

1:8,000

0 270 540 1,080 ft

0 80 160 320 m

- Parcels

Future Landuse

- BUS - Business
- HDR - High Density Residential
- I-G - Industrial-General
- MDR - Medium Density Residential
- M-U - Mixed-Use
- P&C - Park & Conservancy
- LDR - Low Density Residential
- Completed Study Area
- City Limits

County of Dane, Esri Canada, Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA

Web AppBuilder for ArcGIS

County of Dane, Esri Canada, Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA | Tyler Tomaszewski

PARCELS	BUILDING FOOTPRINT/UNITS	APPROXIMATE FLOOR AREA RATIO
Commercial Lot 1 13.1 acres	~120,000 sf	0.2 - 0.3
Mixed Use Lot 1 6.4 acres	~32-58 units	1.0 - 1.3
Multi-Family Lot 1 6.5 acres	~250-300 units	1.3 - 1.8
Lot 1 1.5 acres	~4,000 sf	0.05 - 0.07
Lot 2 1.2 acres	~6,000 sf	0.07 - 0.1
Lot 3 1.8 acres	~6,000 sf	0.07 - 0.1
Lot 4 1.1 acres	~4,000 sf	0.07 - 0.15
Storm Outlot 0.9 acres		

JAMESTOWN QUARRY DEVELOPMENT **CONCEPT MASTER PLAN - A**

FITCHBURG, WI **04.18.2024**

APPENDIX E

NORTH

0 60' 120'

JSD

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PARCELS	BUILDING FOOTPRINT/UNITS	APPROXIMATE FLOOR AREA RATIO
Commercial Lot 1 19.5 acres	~160,000 sf	0.15 - 0.2
Multi-Family Lot 1 6.5 acres	~250-300 units	1.0 - 1.3
Lot 1 1.5 acres	~4,000 sf	0.05 - 0.07
Lot 2 1.2 acres	~6,000 sf	0.07 - 0.1
Lot 3 1.8 acres	~6,000 sf	0.07 - 0.1
Lot 4 1.1 acres	~4,000 sf	0.07 - 0.15
Storm Outlot 0.9 acres		

JAMESTOWN QUARRY DEVELOPMENT **CONCEPT MASTER PLAN - B**

FITCHBURG, WI **04.18.2024**

APPENDIX F

NORTH

0 60' 120'

JSD

APPENDIX G – APPROVED PLANT LIST

Deciduous Trees
Kentucky Coffee Tree
October Glory Maple
Skyline Honeylocust
Street Keeper Honeylocust
Heritage River Birch
State Street Maple
Swamp White Oak

Evergreen Trees
White Pine
White Spruce
Blue Point Juniper
Shawnee Brave Bald Cypress
Plicata Arborvitae

Ornamental Trees
Autumn Brilliance Serviceberry
Moraine Sweetgum
Goldrush Amur Chokecherry

Shrubs
Dense Yew
Kallay Juniper
Green Mountain Boxwood
Shamrock Inkberry
Panicle Hydrangea
Red Twigged Dogwood
Arctic Fire Dogwood
Center Glow Ninebark
Gro Low Sumac
Judd Viburnum

Perennials
Rozanne Geranium
Summer Beauty Allium
Montrose White Catmint
Stella d'Oro Daylily
Goldsturm Coneflower
Butterfly Weed

Grasses
Heavy Metal Switchgrass
Prairie Blues Little Bluestem
Dwarf Fountain Grass
Autumn Moore Grass
Prairie Dropseed

JAMESTOWN QUARRY

CITY OF FITCHBURG, DANE COUNTY, WISCONSIN

SE 1/4, SW 1/4, SECTION 06, TOWNSHIP 6 NORTH, RANGE 9 EAST

DRAWING INDEX

C0.0	TITLE SHEET
1 OF 2	ALTA/NSPS LAND TITLE SURVEY
2 OF 2	ALTA/NSPS LAND TITLE SURVEY
C1.0	NOTES
C1.1	NOTES AND LEGEND
C2.0	DEMOLITION PLAN
C3.0	SITE PLAN
C4.0	GRADING AND EROSION CONTROL PLAN
C5.0	UTILITY PLAN
C6.0	STREET PLAN AND PROFILE
C6.1	STREET PLAN AND PROFILE
C7.0	DETAILS - TYPICAL SECTIONS
C7.1	DETAILS
C7.2	DETAILS
C7.3	DETAILS

PROJECT AREA

NOT TO SCALE

north

JSD

CREATE THE VISION TELL THE STORY

jsdinc.com

MADISON REGIONAL OFFICE
507 WEST VERONA AVENUE, SUITE 500
VERONA, WISCONSIN 53593
P. 608.848.5060

CLIENT:
FITCHBURG PARTNERS, LLC.

CLIENT ADDRESS:
80 OTTAWA AVE. NW, SUITE 410
GRAND RAPIDS, MI 49503

PROJECT:
JAMESTOWN QUARRY

PROJECT LOCATION:
2975 KAPEC ROAD
DANE COUNTY
FITCHBURG, WI 53719

PLAN MODIFICATIONS:

#	Date:	Description:
1	05.21.24	PRELIMINARY PLAT
2		
3		
4		
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7		
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9		
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11		
12		
13		
14		
15		

Designed By: MSS
Reviewed By:
Approved By: CD

SHEET TITLE:
TITLE SHEET

SHEET NUMBER:
C0.0

JSD PROJECT NO: 22-11636

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GENERAL NOTES

1. REFER TO THE EXISTING CONDITIONS SURVEY FOR EXISTING CONDITIONS NOTES AND LEGENDS.
2. ALL WORK IN THE RIGHT-OF-WAY AND/OR PUBLIC EASEMENTS SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, JURISDICTIONAL SPECIFICATIONS, AND APPROVED BY THE JURISDICTION HAVING AUTHORITY.
3. EXISTING GRADE SPOT ELEVATIONS SHOWN FOR INFORMATIONAL PURPOSES. DURING CONSTRUCTION MATCH EXISTING GRADES AT CONSTRUCTION LIMITS.
4. NO SITE GRADING OUTSIDE OR DOWNSLOPE OF PROPOSED SILT FENCE LOCATION. NO LAND DISTURBANCE BEYOND PROPERTY LINES.
5. JSD SHALL BE HELD HARMLESS AND DOES NOT WARRANT ANY DEVIATIONS BY THE OWNER/CONTRACTOR FROM THE APPROVED CONSTRUCTION PLANS THAT MAY RESULT IN DISCIPLINARY ACTIONS BY ANY OR ALL REGULATORY AGENCIES.
6. CONTRACTOR SHALL RESTORE ALL BUILDINGS, PAVEMENT, PIPES, SLOPES, AND STRUCTURES DAMAGED BY THE CONTRACTOR TO PRE-EXISTING OR BETTER CONDITIONS.
7. THE RIGHT-OF-WAY IS THE SOLE JURISDICTION OF THE JURISDICTIONAL AUTHORITY AND IS SUBJECT TO CHANGE AT ANY TIME.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY DURING THE CONSTRUCTION OF THESE IMPROVEMENTS.
9. ANY REFERENCES TO THE TERMS OR ENTITY ABBREVIATIONS IN THE FOLLOWING NOTES AND SPECIFICATIONS SHALL BE UNDERSTOOD AS FOLLOWS:

9.1. "JURISDICTION " - THE LOCAL GOVERNMENTAL AGENCY (I.E., CITY, VILLAGE, TOWN, COUNTY, STATE, OR UTILITY SERVICE PROVIDER) HAVING AUTHORITY.
9.2. "STATE HIGHWAY SPECIFICATIONS" - STATE OF WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, CURRENT EDITION AND SUPPLEMENTS
9.3. "STANDARD SPECIFICATIONS" - STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, CURRENT EDITION AND SUPPLEMENTS
9.4. WISCONSIN DEPARTMENT OF TRANSPORTATION - "WISDOT"
9.5. WISCONSIN DEPARTMENT OF NATURAL RESOURCES - "WDNR"
9.6. DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES - "DSPS" OR "SPS"

DEMOLITION NOTES

1. THIS PLAN INDICATES ITEMS ON THE PROPERTY INTENDED FOR DEMOLITION BASED ON THE CURRENT SITE DESIGN THAT HAVE BEEN IDENTIFIED BY A REASONABLE OBSERVATION OF THE EXISTING CONDITIONS THROUGH FIELD SURVEY RECONNAISSANCE, "DIGGERS HOTLINE" LOCATION, AND GENERAL "STANDARD OF CARE". THERE MAY BE ADDITIONAL ITEMS THAT CAN NOT BE IDENTIFIED BY A REASONABLE ABOVEGROUND OBSERVATION, OF WHICH THE ENGINEER WOULD HAVE NO KNOWLEDGE OR MAY BE A PART OF ANOTHER DESIGN DISCIPLINE. IT IS THE CONTRACTOR'S/BIDDER'S RESPONSIBILITY TO REVIEW THE PLANS, INSPECT THE SITE, AND PROVIDE THEIR OWN DUE DILIGENCE TO INCLUDE IN THEIR BID WHAT ADDITIONAL ITEMS, IN THEIR OPINION, MAY BE NECESSARY FOR DEMOLITION. ANY ADDITIONAL ITEMS IDENTIFIED BY THE CONTRACTOR/BIDDER SHALL BE IDENTIFIED IN THE BID AND REPORTED TO THE ENGINEER OF RECORD. JSD TAKES NO RESPONSIBILITY FOR ITEMS ON THE PROPERTY THAT COULD NOT BE LOCATED BY A REASONABLE OBSERVATION OF THE PROPERTY OR OF WHICH THEY WOULD HAVE NO KNOWLEDGE.
2. CONTRACTOR SHALL KEEP ALL STREETS AND PRIVATE DRIVES FREE AND CLEAR OF ALL CONSTRUCTION-RELATED DIRT, DUST, AND DEBRIS.
3. ALL TREES WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED UNLESS SPECIFICALLY CALLED OUT FOR PROTECTION. ALL TREES TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY. STUMPS MAY BE GROUND TO PROPOSED SUBGRADE IN GRASSED AREAS ONLY UNLESS DIRECTED BY ENGINEER.
4. ALL LIGHT POLES TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY, INCLUDING BASE AND ALL APPURTENANCES. SALVAGE FOR RELOCATION. COORDINATE RELOCATION AND/OR ABANDONMENT OF ALL ELECTRIC LINES WITH ELECTRICAL ENGINEER AND OWNER PRIOR TO DEMOLITION.
5. ABANDONED/REMOVED ITEMS SHALL BE LEGALLY DISPOSED OF OFFSITE UNLESS OTHERWISE NOTED.
6. CONTRACTOR TO REPLACE ALL SIDEWALK AND CURB AND GUTTER ABUTTING THE PROPERTIES THAT WERE DAMAGED BY THE CONSTRUCTION.
7. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE TO:

7.1. EXAMINE ALL SITE CONDITIONS RELATIVE TO THE CONDITIONS INDICATED ON THE ENGINEERING DRAWINGS. ANY DISCREPANCIES ARE TO BE REPORTED IMMEDIATELY TO THE ENGINEER AND RESOLVED PRIOR TO THE START OF CONSTRUCTION.
7.2. VERIFY UTILITY ELEVATIONS AND NOTIFY ENGINEER OF ANY DISCREPANCIES. NO WORK SHALL BE PERFORMED UNTIL THE DISCREPANCIES ARE RESOLVED.
7.3. NOTIFY ALL UTILITIES OWNER'S PRIOR TO THE REMOVAL OF ANY UNDERGROUND UTILITIES.
7.4. NOTIFY THE DESIGN ENGINEER AND LOCAL CONTROLLING MUNICIPALITY 48 HOURS PRIOR TO THE START OF CONSTRUCTION TO ARRANGE FOR APPROPRIATE CONSTRUCTION INSPECTION.

8. ANY UTILITIES THAT ARE DAMAGED BY THE CONTRACTORS SHALL BE REPAIRED TO THE OWNER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE.
9. CONTRACTOR SHALL COORDINATE PRIVATE UTILITY REMOVAL/ABANDONMENT AND NECESSARY RELOCATION WITH RESPECTIVE UTILITY COMPANY. CONTRACTOR SHALL COORDINATE WITH PRIVATE UTILITY COMPANIES PRIOR TO CONSTRUCTION.
10. ALL DEMOLITION SHALL BE IN ACCORDANCE WITH THE APPROVED JURISDICTION'S RECYCLING PLAN.
11. ANY CONTAMINATED SOILS ENCOUNTERED SHALL BE REMOVED IN ACCORDANCE WITH FEDERAL AND STATE REGULATIONS TO AN APPROPRIATE AND APPROVED LANDFILL.
12. ALL EXISTING UTILITIES SHALL BE FIELD LOCATED AND CLEARLY MARKED BY CONTRACTOR PRIOR TO ANY EXCAVATION. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF ANY DISCREPANCIES OCCUR IN THE LOCATION SHOWN OR PROPOSED IMPROVEMENTS IMPACTING EXISTING UTILITY LINE LOCATION(S). CONTRACTOR SHALL BE RESPONSIBLE FOR CONDUCTING UTILITY LINE OPENINGS (ULO) TO CONFIRM LOCATIONS OR ELEVATIONS, AS REQUESTED BY THE ENGINEER.
13. SEWER ABANDONMENT SHALL BE IN ACCORDANCE WITH SECTION 3.2.24 OF THE STANDARD SPECIFICATIONS AND JURISDICTIONAL SPECIFICATIONS.
14. WATER ABANDONMENT SHALL BE IN ACCORDANCE WITH SECTION 4.14.0 OF THE STANDARD SPECIFICATIONS AND JURISDICTIONAL SPECIFICATIONS.
15. ALL PERIMETER EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO THE START OF DEMOLITION ACTIVITIES. CONTRACTOR SHALL KEEP ALL STREETS AND PAVEMENTS FREE AND CLEAR OF ALL CONSTRUCTION RELATED DIRT, DUST, AND DEBRIS.
16. BUILDING REMOVALS SHALL BE PREFORMED BY A QUALIFIED CONTRACTOR. CONTRACTOR SHALL FOLLOW ALL DEMOLITION REGULATIONS, DISCONNECT ALL UTILITIES, OBTAIN ALL APPLICABLE PERMITS, AND DISPOSE OF ALL BUILDING MATERIALS IN APPROPRIATE AND APPROVED LANDFILLS. DEMOLISHED MATERIALS SHALL NOT BE BURNED OR BURIED ONSITE.
17. CONTRACTOR SHALL REMOVE EXISTING UTILITY PIPE OR PROVIDE PIPE BACKFILLING AFTER REMOVAL OF EXISTING UTILITIES WITHIN BUILDING FOOTPRINT USING "LOW DENSITY CONCRETE/FLOWABLE FILL".
18. RESTORATION OF THE EXISTING ROADWAY RIGHT-OF-WAYS ARE CONSIDERED INCIDENTAL AND SHALL BE PART OF THE COST OF THE UNDERGROUND IMPROVEMENTS, DEMOLITION, AND REMOVAL. THIS INCLUDES CURB AND GUTTER, SIDEWALK, TOPSOIL, SEEDING, AND MULCHING.

CONSTRUCTION SEQUENCING

1. INSTALL PERIMETER SILT FENCE, WATTLES, INLET PROTECTION, AND CONSTRUCTION ENTRANCE.
2. STRIP AND STOCKPILE TOPSOIL AND INSTALL SILT FENCE AROUND PERIMETER OF STOCKPILE.
3. ROUGH GRADE RETENTION POND AND INSTALL POND OUTLET.
4. CONDUCT ROUGH GRADING EFFORTS AND INSTALL CHECK DAMS WITHIN DRAINAGE DITCHES.
5. INSTALL UTILITY PIPING AND STRUCTURES, IMMEDIATELY INSTALL INLET PROTECTION.
6. COMPLETE FINAL GRADING, INSTALLATION OF GRAVEL BASE COURSES, PLACEMENT OF CURBS, PAVEMENTS, WALKS, ETC.
7. PLACE TOPSOIL AND IMMEDIATELY STABILIZE DISTURBED AREAS WITH EROSION CONTROL MEASURES AS INDICATED ON PLANS.
8. RESTORE RETENTION POND (FINAL GRADE RETENTION POND PER PLAN REQUIREMENTS).
9. EROSION CONTROLS SHALL NOT BE REMOVED UNTIL SITE IS FULLY STABILIZED OR 70% CONTIGUOUS VEGETATIVE COVER IS ESTABLISHED.

CONTRACTOR MAY MODIFY SEQUENCING AFTER ITEM NO. 1 AS NEEDED TO COMPLETE CONSTRUCTION IF EROSION CONTROLS ARE MAINTAINED IN ACCORDANCE WITH THE CONSTRUCTION SITE EROSION CONTROL REQUIREMENTS.

PAVING NOTES

1. GENERAL:
1.1. PAVING SHALL CONFORM TO STATE HIGHWAY SPECIFICATIONS, APPLICABLE JURISDICTIONAL SPECIFICATIONS, AND THE GEOTECHNICAL REPORT PREPARED BY **[FIRM NAME]**, TITLED **["REPORT TITLE"]**, ISSUE DATE **[DATE]**. ALL REFERENCES TO THE "GEOTECHNICAL REPORT" SHALL BE UNDERSTOOD AS THE AFOREMENTIONED REPORT.
1.2. ALL PAVING DIMENSIONS ARE TO FACE OF CURB UNLESS SPECIFIED OTHERWISE.
1.3. ALL SPOT GRADES ARE TO EDGE OF PAVEMENT UNLESS SPECIFIED OTHERWISE.
1.4. SURFACE PREPARATION - NOTIFY ENGINEER/OWNER OF UNSATISFACTORY CONDITIONS. DO NOT BEGIN PAVING WORK UNTIL DEFICIENT SUBBASE AREAS HAVE BEEN CORRECTED AND ARE READY TO RECEIVE PAVING.
1.5. ANY REQUIRED REPLACEMENT OF PUBLIC CURB AND GUTTER, PAVEMENT, OR SIDEWALK SHALL MATCH EXISTING AND MEET JURISDICTIONAL REQUIREMENTS.

2. CRUSHED AGGREGATE BASE COURSE SPECIFICATIONS:
2.1. THE TOP LAYER OF BASE COURSE SHALL CONFORM TO SECTIONS 301 AND 305 OF THE STATE HIGHWAY SPECIFICATIONS.
2.2. RECLAIMED OR RECYCLED ASPHALT MAY NOT BE USED AS CRUSHED AGGREGATE BASE COURSE UNLESS SPECIFICALLY APPROVED BY THE ENGINEER OF RECORD. USE OF ANY OTHER REPROCESSED OR BLENDED MATERIAL MUST FIRST BE APPROVED BY ENGINEER OF RECORD.
2.3. DO NOT PLACE BASE ON FROZEN FOUNDATIONS UNLESS THE ENGINEER APPROVES OTHERWISE.
2.4. DO NOT PLACE BASE ON FOUNDATIONS THAT ARE SOFT, SPONGY, OR COVERED BY ICE OR SNOW.

3. HOT MIXED ASPHALT (HMA) PAVING SPECIFICATIONS:
3.1. THE PLACING, CONSTRUCTION, AND COMPOSITION OF THE BASE COURSE AND HMA SURFACE COURSE SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTIONS 450, 455, 460, AND 465 OF THE STATE HIGHWAY SPECIFICATIONS.
3.2. WEATHER LIMITATIONS:
3.2.1. DO NOT PLACE HMA WHEN BASE IS WET OR CONTAINS EXCESS MOISTURE.
3.2.2. DO NOT PLACE ASPHALTIC MIXTURE WHEN THE AIR TEMPERATURE IS APPROXIMATELY 3° ABOVE GRADE, IN SHADE, AND AWAY FROM ARTIFICIAL HEAT SOURCES IS LESS THAN 40°F UNLESS A VALID ENGINEER-ACCEPTED COLD WEATHER PAVING PLAN IS IN EFFECT.
3.2.3. PLACE ASPHALTIC MIXTURE ONLY ON A PREPARED, FIRM, AND COMPACTED BASE, FOUNDATION LAYER, OR EXISTING PAVEMENT SUBSTANTIALLY SURFACE-DRY AND FREE OF LOOSE AND FOREIGN MATERIAL. DO NOT PLACE OVER FROZEN SUBGRADE OR BASE, OR WHERE THE ROADBED IS UNSTABLE.
3.2.4. APPLY TACK COAT ONLY WHEN THE AIR TEMPERATURE IS 32°F OR MORE UNLESS THE ENGINEER APPROVES OTHERWISE IN WRITING.
3.2.5. ALL ASPHALT (BOTH UPPER AND LOWER LAYERS) SHALL BE DELIVERED TO THE PROJECT SITE AT A TEMPERATURE NOT LOWER THAN 250°F.
3.3. CONTRACTOR SHALL ESTABLISH AND MAINTAIN REQUIRED LINES AND ELEVATIONS FOR EACH COURSE DURING CONSTRUCTION.
3.4. BINDER COURSE AGGREGATE:
3.4.1. THE AGGREGATE FOR THE BINDER COURSE SHALL CONFORM TO SECTION 460 OF THE STATE HIGHWAY SPECIFICATIONS.
3.5. SURFACE COURSE AGGREGATE
3.5.1. THE AGGREGATE FOR THE SURFACE COURSE SHALL CONFORM TO SECTIONS 460 AND 465 OF THE STATE HIGHWAY SPECIFICATIONS.
3.6. ASPHALTIC MATERIALS
3.6.1. THE ASPHALTIC MATERIALS SHALL CONFORM TO SECTIONS 455, 460, AND 465 OF THE STATE HIGHWAY SPECIFICATIONS.

4. CONCRETE PAVING SPECIFICATIONS:
4.1. CONCRETE PAVING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTIONS 405, 415, AND 416 OF THE STATE HIGHWAY SPECIFICATIONS.
4.2. CURING COMPOUNDS SHALL CONFORM TO SECTION 415 OF THE STATE HIGHWAY SPECIFICATIONS.
4.3. CONTRACTOR SHALL PROVIDE A JOINTING PLAN TO ENGINEER IF NOT INCLUDED IN THE PLANS. CONTRACTOR SHALL PROVIDE CONTROL JOINTS AND CONSTRUCTION JOINTS OF ONE-QUARTER CONCRETE THICKNESS AT AN EQUAL RATIO OF LENGTH TO WIDTH WHEREVER POSSIBLE WITH A MAXIMUM LENGTH BETWEEN JOINTS OF 15' ON CENTER
4.4. CONTRACTOR SHALL PROVIDE EXPANSION JOINTS IN SIDEWALKS AT A MAXIMUM 100' APART.
4.5. PLACE EXPANSION JOINTS IN CURB, GUTTER, OR CURB AND GUTTER CONSTRUCTED NEXT TO ASPHALTIC PAVEMENT OR SURFACING. LOCATE JOINTS EVERYWHERE THAT TANGENT AND RADIAL CURB OR CURB AND GUTTER MEET; ON EACH SIDE OF EVERY INLET 3' FROM THE INLET, BUT NO CLOSER THAN 6' FROM ANOTHER JOINT; AND ON TANGENT SECTIONS PLACE BETWEEN 6' AND 300'.
4.6. IF CONSTRUCTING CURB, GUTTER, OR CURB AND GUTTER NEXT TO, OR ON, CONCRETE PAVEMENT CONSTRUCTED WITH EXPANSION JOINTS, THEN PLACE EXPANSION JOINTS TO MATCH THE EXPANSION JOINT LOCATIONS IN THE PAVEMENTS.
4.7. FOR CURB AND GUTTER, FORM CONTRACTION JOINTS BY SAWING OR FORMING AN INDUCED PLANE OF WEAKNESS AT LEAST 2" DEEP IN THE CURB, GUTTER, OR CURB AND GUTTER DIRECTLY OPPOSITE CONSTRUCTION OR CONTRACTION JOINTS IN ADJOINING CONCRETE PAVEMENT AND AT THE REQUIRED SPACING IN CURB, GUTTER, OR CURB AND GUTTER ADJOINING ASPHALTIC PAVEMENT. SPACE JOINTS BETWEEN 6' AND APPROXIMATELY 20' APART, AS THE ENGINEER DIRECTS.
4.8. EXTERIOR CONCRETE SURFACES SHALL BE BROOM FINISHED.
4.9. CONTRACTOR SHALL INSTALL TRUNCATED DOME WARNING DETECTION FIELD SHALL BE PLACED AT ALL ADA RAMPS AS SPECIFIED ON PLANS AND IN ACCORDANCE WITH STATE AND FEDERAL REQUIREMENTS.

5. PAVEMENT MARKING SPECIFICATIONS:
5.1. ALL PARKING STALL LINES SHALL BE 4" WIDE, HIGH VISIBILITY YELLOW LATEX PAINT.
5.2. ALL PAVEMENT MARKINGS INCLUDING STOP BARS, CROSSWALKS, DIRECTIONAL ARROWS, PARKING STALL LINES, ADA STALL MARKINGS, NO PARKING ZONES, AND DROP-OFF/PICK-UP ZONES SHALL BE PAINTED WITH LATEX PAINT PER SPECIFICATIONS.

SEEDING AND RESTORATION NOTES

1. CONTRACTOR SHALL PROVIDE NOTICE TO THE JURISDICTIONAL AUTHORITIES IN ADVANCE OF ANY SOIL DISTURBING ACTIVITIES, IN ACCORDANCE WITH MUNICIPAL REQUIREMENTS.
2. ALL DISTURBED AREAS SHALL BE SODDED AND/OR SEEDED AND MULCHED IMMEDIATELY FOLLOWING GRADING ACTIVITIES.
3. CONTRACTOR SHALL WATER ALL NEWLY SODDED/SEEDED AREAS DURING THE SUMMER MONTHS WHENEVER THERE IS A 7-DAY LAPSE WITH NO SIGNIFICANT RAINFALL.
4. ALL SLOPES 20% OR GREATER SHALL BE TEMPORARILY SEEDED, MULCHED, OR OTHER MEANS OF COVER PLACED ON THEM WITHIN 2 WEEKS OF DISTURBANCE. REFER TO STABILIZATION PRACTICES IN THE EROSION CONTROL NOTES FOR FURTHER SPECIFICATIONS.
5. CONTRACTOR SHALL CHISEL-PLOW OR DEEP TILL WITH DOUBLE TINES ALL STORMWATER MANAGEMENT FACILITIES JUST PRIOR TO SODDING AND/OR SEEDING AND MULCHING TO PROMOTE INFILTRATION.
6. SEEDING SPECIFICATIONS:
6.1. TURF LAWN SEED MIXTURE: WISDOT SEED MIX NO. 40 AT RATES SPECIFIED IN SECTION 630 OF THE STATE HIGHWAY SPECIFICATIONS
6.2. LOW MAINTENANCE AREA SEED MIXTURE: WISDOT SEED MIX NO. 10 OR 20 APPLIED AT RATES AS SPECIFIED IN SECTION 630 OF THE STATE HIGHWAY SPECIFICATIONS.
6.3. NO-MOW AREA SEED MIXTURE: NO-MOW LAWN SEED MIX, AS PROVIDED BY PRAIRIE NURSERY, P.O. BOX 306, WESTFIELD, WISCONSIN, 53964, TEL. 608-296-3679 (OR APPROVED EQUIVALENT). SEEDING RATE SHALL BE PER MANUFACTURE'S RECOMMENDATIONS.
7. SEED PREPARATION SPECIFICATIONS:
7.1. SCARIFY SUBSOILS TO A DEPTH OF 3" WHERE TOPSOIL SHALL BE PLACED TO REDUCE COMPACTION.
7.2. PLACE TOPSOIL AT A MINIMUM DEPTH OF 6" UNLESS OTHERWISE NOTED ON THE PLANS.
7.3. APPLY FERTILIZER IN ACCORDANCE WITH SEED MIX MANUFACTURES RECOMMENDATIONS.
7.4. SOW SEED AT RATES SPECIFIED USING METHOD "A" OR METHOD "B" AS SPECIFIED IN SECTION 630 OF THE STATE HIGHWAY SPECIFICATIONS.
8. SEED MULCHING/EROSION MATTING SPECIFICATIONS:
8.1. ALL SEEDED AREAS WITH SLOPES FLATTER THAN 4:1, UNLESS OTHERWISE NOTED ON THE PLANS, SHALL BE STABILIZED WITH WEED-FREE WHEAT STRAW MULCH WITH METHODS AND RATES IN ACCORDANCE WITH SECTION 627 OF THE STATE HIGHWAY SPECIFICATIONS.
8.2. ALL SEEDED AREAS WITH SLOPES EQUAL TO OR STEEPER THAN 4:1, UNLESS OTHERWISE NOTED ON THE PLANS, SHALL BE STABILIZED WITH EROSION MATTING MATERIALS AS SPECIFIED ON THE PLANS. EROSION MATTING SHALL BE IN ACCORDANCE WITH SECTION 628 OF THE STATE HIGHWAY SPECIFICATIONS.

UTILITY NOTES

1. ALL EXISTING UTILITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATION AS TO THE TYPE AND LOCATIONS OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. CONTRACTOR/OWNER SHALL CALL "DIGGERS HOTLINE" PRIOR TO ANY CONSTRUCTION.
2. PRIOR TO CONSTRUCTION, THE PRIME CONTRACTOR IS RESPONSIBLE FOR:
2.1. EXAMINING ALL SITE CONDITIONS RELATIVE TO THE CONDITIONS INDICATED ON THE ENGINEERING DRAWINGS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER AND RESOLVED PRIOR TO THE START OF CONSTRUCTION.
2.2. OBTAINING ALL PERMITS INCLUDING PERMIT COSTS, TAP FEES, METER DEPOSITS, BONDS, AND ALL OTHER FEES REQUIRED FOR PROPOSED WORK TO OBTAIN OCCUPANCY.
2.3. VERIFYING ALL ELEVATIONS, LOCATIONS, AND SIZES OF SANITARY, WATER, AND STORM LATERALS AND CHECK ALL UTILITY CROSSINGS FOR CONFLICTS. NOTIFY ENGINEER OF ANY DISCREPANCY. NO WORK SHALL BE PERFORMED UNTIL THE DISCREPANCY IS RESOLVED.
2.4. NOTIFYING ALL UTILITIES PRIOR TO INSTALLATION OF ANY UNDERGROUND IMPROVEMENTS.
2.5. NOTIFYING THE DESIGN ENGINEER AND JURISDICTIONAL AUTHORITY 48 HOURS PRIOR TO THE START OF CONSTRUCTION TO ARRANGE FOR APPROPRIATE CONSTRUCTION OBSERVATION.
2.6. COORDINATING ALL CONSTRUCTION WITH OTHER CONTRACTORS INVOLVED WITH CONSTRUCTION OF THE PROPOSED DEVELOPMENT AND FOR REPORTING ANY ERRORS OR DISCREPANCIES BETWEEN THESE PLANS AND PLANS PREPARED BY OTHERS.
3. ALL UTILITY WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC UTILITIES AND STATE DSPS/SPS AND LOCAL CODES AND SPECIFICATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE WHICH SPECIFICATIONS AND CODES APPLY, AND TO COORDINATE ALL CONSTRUCTION ACTIVITIES WITH THE APPROPRIATE JURISDICTIONAL AUTHORITIES.
4. SPECIFICATIONS SHALL COMPLY WITH THE JURISDICTIONAL AUTHORITY'S SPECIAL PROVISIONS.
5. LENGTHS OF ALL UTILITIES ARE TO CENTER OF STRUCTURES OR FITTINGS AND MAY VARY SLIGHTLY FROM PLAN. LENGTHS SHALL BE VERIFIED IN THE FIELD DURING CONSTRUCTION.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY DURING THE CONSTRUCTION OF IMPROVEMENTS.
7. CONTRACTOR SHALL INSTALL A PEDESTRIAN FENCE AROUND ALL EXCAVATIONS TO BE LEFT OPEN OVERNIGHT AS REQUIRED IN CONSTRUCTION SITES WHERE THE POTENTIAL FOR PEDESTRIAN INJURY EXISTS.
8. CONTRACTOR SHALL ADJUST AND/OR RECONSTRUCT ALL UTILITY COVERS (SUCH AS MANHOLE COVERS, VALVE BOX COVERS, ETC.) TO MATCH THE FINISHED GRADES OF THE AREAS EFFECTED BY THE CONSTRUCTION.
9. ALL NON-METALLIC UTILITY PIPES (SANITARY SEWER, STORM SEWER, AND WATER PIPING) SHALL BE INSTALLED IN CONJUNCTION WITH TRACER WIRE AS REQUIRED BY SPS 382.30(11)(H), SPS 382.36(7)(C)10., AND SPS 382.40(8)(K). COLOR OF TRACER WIRE SHALL BE: SANITARY SEWER - GREEN, STORM SEWER - BROWN, WATER - BLUE, NON-POTABLE WATER - PURPLE.
10. DRY UTILITIES (COMMUNICATION, TELEPHONE, GAS, ELECTRIC, ETC.) ARE SHOWN FOR GENERAL ROUTING ONLY. CONTRACTOR SHALL COORDINATE DESIGN AND FINAL LOCATION WITH APPROPRIATE UTILITY COMPANY.
11. THE PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL CONSTRUCTION WITH OTHER CONTRACTORS INVOLVED WITH CONSTRUCTION OF THE PROPOSED DEVELOPMENT AND FOR REPORTING ANY ERRORS OR DISCREPANCIES BETWEEN THESE PLANS AND PLANS PREPARED BY OTHERS.
12. ANY SANITARY SEWER, SANITARY SEWER SERVICES, WATER MAIN, WATER SERVICES, STORM SEWER, OR OTHER UTILITIES, WHICH ARE DAMAGED BY THE CONTRACTORS, SHALL BE REPAIRED TO THE JURISDICTIONAL AUTHORITY'S SATISFACTION AT THE CONTRACTOR'S EXPENSE.
13. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE ENGINEER WITH AS-BUILT CONDITIONS OF THE INSTALLED IMPROVEMENTS IN ORDER THAT THE APPROPRIATE DRAWINGS CAN BE PREPARED, IF REQUIRED, ANY CHANGES TO THE DRAWINGS OR ADDITIONAL ITEMS MUST BE REPORTED TO THE ENGINEER AS WORK PROGRESSES.
14. IN ANY LOCATIONS WHERE BUILDING SEWERS (STORM AND SANITARY) ARE INSTALLED WITH LESS THAN THE MINIMUM COVER AS SPECIFIED IN SPS 382.30(11)(c) OR WATER PIPING 382.40(8)(a), CONTRACTOR SHALL INSTALL INSULATION IN ACCORDANCE WITH SPS 382.30(11)(c)2. FOR PROTECTION FROM FROST.
15. STORM SEWER SPECIFICATIONS:
15.1. PIPE:
15.1.1. REINFORCED CONCRETE PIPE (RCP) - SHALL MEET THE REQUIREMENTS OF ASTM CLASS III (MINIMUM) C76 WITH RUBBER GASKET JOINTS CONFORMING TO ASTM C443.
15.1.2. HIGH DENSITY DUAL-WALL POLYETHYLENE CORRUGATED PIPE (HDPE) - SHALL BE AS MANUFACTURED BY ADS OR EQUAL WITH WATERTIGHT JOINTS, AND SHALL MEET THE REQUIREMENTS OF AASHTO DESIGNATION M294 TYPE "S".
15.1.3. POLYVINYL CHLORIDE (PVC) - SHALL MEET REQUIREMENTS OF ASTM D3034, SDR 35 FOR PIPE SIZES 8"-15" WITH INTEGRAL BELL TYPE FLEXIBLE ELECTROMETRIC JOINTS, MEETING THE REQUIREMENTS OF ASTM D3212. ASTM 1785 SCHEDULE 40 FOR PIPE DIAMETERS 4"-6". SDR 35 SHALL BE USED FOR DEPTHS 3'-15' AND SDR 26 FOR DEPTHS 16'-25' DEPENDENT ON LOCAL JURISDICTION.
15.2. INLETS AND CATCH BASINS:
15.2.1. INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CHAPTER 3.6.3 AND DETAIL DRAWINGS FILE. NO. 28 OR 29 OF THE STANDARD SPECIFICATIONS, OR APPROVED EQUAL WITH A 2'X3' MAXIMUM OPENING.
15.2.2. POLYVINYL CHLORIDE (PVC) INLETS BY NYLOPLAST ONLY WHEN SPECIFIED ON PLANS, CONFORMING TO ASTM D1781, ASTM D3212, ASTM F477, AND MANUFACTURER'S REQUIREMENTS. REFER TO PLANS FOR LID OR GRATE SPECIFICATION.
15.2.3. FRAME AND GRATE/LIDS:
15.2.3.1. CURB FRAME AND GRATES SHALL BE NEENAH R-3067 WITH TYPE "R" GRATE OR EQUAL, UNLESS AS SPECIFIED IN THE PLANS.
15.2.3.2. SOLID LID FRAME AND GRATES SHALL BE NEENAH R-1550, HEAVY DUTY NON-ROCKING SOLID LID OR EQUAL, UNLESS AS SPECIFIED IN THE PLANS.
15.2.3.3. GRATE FRAME AND GRATES SHALL BE NEENAH R-1550, HEAVY DUTY WITH A R-2578 GRATE OR EQUAL, UNLESS AS SPECIFIED IN THE PLANS.
15.2.4. MANHOLES:
15.2.4.1. MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH CHAPTER 3.5.0 AND DETAIL DRAWINGS FILE NO. 11 AND/OR 12 OF THE STANDARD SPECIFICATIONS.
15.2.3.2. MANHOLE FRAMES AND COVERS SHALL BE NEENAH R-1550, HEAVY DUTY NON-ROCKING SOLID LID OR EQUAL, UNLESS AS SPECIFIED IN THE PLANS.
15.3. BACKFILL AND BEDDING:
15.3.1. STORM SEWER SHALL BE CONSTRUCTED WITH GRAVEL BACKFILL AND CLASS "B" BEDDING IN ALL PAVED AREAS AND TO A POINT 5' BEYOND THE EDGE OF PAVEMENT. TRENCHES RUNNING PARALLEL TO AND LESS THAN 5' FROM THE EDGE OF PAVEMENT SHALL ALSO REQUIRE GRAVEL BACKFILL.
15.3.2. LANDSCAPED AREAS MAY BE BACKFILLED WITH EXCAVATED MATERIAL IN CONFORMANCE WITH SECTION 8.43.5 OF THE STANDARD SPECIFICATIONS.
15.4. FIELD TILE CONNECTIONS:
15.4.1. ALL FIELD TILE ENCOUNTERED DURING CONSTRUCTION SHALL BE INCLUDED IN THE UNIT PRICE(S) FOR STORM SEWER. TILE LINES CROSSED BY THE TRENCH SHALL BE REPLACED WITH THE SAME MATERIAL AS THE STORM SEWER.
16. WATER MAIN & WATER LATERAL SPECIFICATIONS:
16.1. PIPE:
16.1.1. DUCTILE IRON PIPE SHALL BE CLASS 52 CONFORMING TO AWWA C151 AND CHAPTER 8.18.0 OF THE STANDARD SPECIFICATIONS.
16.1.2. POLYVINYL CHLORIDE PRESSSURE PIPE (PVC) SHALL BE MANUFACTURED IN ACCORDANCE WITH AWWA C900 DR14 (CLASS 305) FOR SIZES UP TO 4" AND AWWA C900 DR18 (CLASS 235) UP TO 30".WITH INTEGRAL ELASTOMERIC BELL AND SPIGOT JOINTS.
16.1.3. COPPER TYPE K TUBING SHALL CONFORM TO ASTM DESIGNATION B88 FOR WATER SERVICES LESS THAN 2" IN DIAMETER
16.1.4. HIGH DENSITY POLYETHYLENE (HDPE) SHALL CONFORM TO THE REQUIREMENTS OF AWWA C901, SDR 9 MINIMUM FOR SIZES UP TO 3" AND TO AWWA C906, SDR 17 MINIMUM FOR SIZES GREATER THAN 3".
17.2. VALVES AND VALVE BOXES:
17.2.1. GATE VALVES SHALL BE AWWA GATE VALVES MEETING THE REQUIREMENTS OF AWWA C500 AND CHAPTER 8.27.0 OF THE STANDARD SPECIFICATIONS.
17.2.2. CURB STOPS AND CORPORATION VALVES SHALL BE AWWA C800 AND ASTM B62, AND CONFORM TO ANY LOCAL JURISDICTIONAL REQUIREMENTS.
17.3. WATER SERVICES CONNECTIONS
17.3.1. SERVICES 2" IN DIAMETER OR LESS SHALL USE A TAP SERVICE WITH A CORPORATION STOP AND CURB STOP VALVE WITH SERVICE BOX PER JURISDICTIONAL REQUIREMENTS.
17.3.2. SERVICES GREATER THAN 2" IN DIAMETER SHALL USE A TAPPING SLEEVE OR CUT-IN TEE CONNECTION WITH VALVE OF EQUIVALENT PIPE DIAMETER AND VALVE BOX PER JURISDICTIONAL REQUIREMENTS.
17.4. HYDRANTS:
17.4.1. HYDRANTS SHALL CONFORM TO THE SPECIFICATIONS OF THE JURISDICTIONAL AUTHORITIES. THE DISTANCE FROM THE GROUND LINE TO THE CENTERLINE OF THE LOWEST NOZZLE AND THE LOWEST CONNECTION OF THE FIRE DEPARTMENT SHALL BE NO LESS THAN 18 " AND NO GREATER THAN 23"(SEE DETAIL).
17.5. JOINT RESTRAINT:
17.5.1. WHERE SPECIFIED, DUCTILE IRON PIPE SHALL INCLUDE MECHANICAL JOINTS CONFORMING TO CHAPTER 4.4.2(b) OF THE STANDARD SPECIFICATIONS. POLYETHYLENE WRAP SHALL BE USED AROUND ALL MECHAN

GRADING AND EARTHWORK NOTES

1. ALL SITE PREP AND EARTHWORK SHALL CONFORM TO THE GEOTECHNICAL REPORT PREPARED BY **[FIRM NAME]**, TITLED **["REPORT TITLE"]**, ISSUE DATE **[DATE]**. ALL REFERENCES TO THE "GEOTECHNICAL REPORT" SHALL BE UNDERSTOOD AS THE AFOREMENTIONED REPORT.

2. ALL PROPOSED GRADES SHOWN ARE FINISHED GRADES. CONTRACTOR SHALL VERIFY ALL GRADES, MAKE SURE ALL AREAS DRAIN PROPERLY, AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO CONSTRUCTION.

3. CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR COMPUTATIONS OF ALL GRADING QUANTITIES. WHILE JSD PROFESSIONAL SERVICES, INC. ATTEMPTS TO PROVIDE A COST-EFFECTIVE APPROACH TO BALANCE EARTHWORK, GRADING DESIGN IS BASED ON MANY FACTORS, INCLUDING SAFETY, AESTHETICS, AND COMMON ENGINEERING STANDARDS OF CARE. THEREFORE, NO GUARANTEE CAN BE MADE FOR A BALANCED SITE.

4. ALL EXCAVATIONS AND FILLS SHALL BE TO THE ELEVATIONS SHOWN ON THE DRAWINGS AND SHALL INCLUDE SUFFICIENT DEPTHS FOR PLACEMENT OF FILL MATERIALS, BASE COURSES, PAVEMENTS, TOPSOIL, AND OTHER MATERIALS TO THE SPECIFIED DEPTHS.

5. CONTRACTOR SHALL NOT EXCAVATE BELOW ELEVATIONS OR DESIGN GRADES SHOWN ON THE DRAWINGS WITHOUT PRIOR AUTHORIZATION FROM ENGINEER AND OWNER.

6. PRIOR TO ALL EXCAVATION OR FILLING OPERATIONS, CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL TOPSOIL FROM PROPOSED LOCATIONS OF BUILDINGS, STRUCTURES, ROADS, WALKS, OTHER PAVED AREAS, STORM WATER FACILITIES OR WITHIN THE GRADING EXTENTS WHERE EXISTING GRADES ARE ALTERED BY MORE THAN 3". REMOVED OR STRIPPED TOPSOIL SHALL BE SEGREGATED AND STOCKPILED ON-SITE IN AN APPROPRIATE LOCATION TO BE RESPREAD AS SPECIFIED ON THE DRAWINGS.

7. CONTRACTOR SHALL NOT PLACE ANY FILL OR OTHER MATERIALS ON AREAS THAT HAVE NOT HAD TOPSOIL REMOVED, ARE FROZEN, SATURATED, OR YIELDING. CONTRACTOR SHALL NOTIFY OWNER OR ENGINEER IF SUBGRADE CONDITIONS ARE NOT SUITABLE FOR SUPPORTING FILL AND A FURTHER DETERMINATION SHALL BE PROVIDED BY OWNER OR ENGINEER.

8. CONTRACTOR SHALL PLACE THE FILLS IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT INCLUDING LIFT DEPTHS AND COMPACTION EFFORTS.

9. PRIOR TO PLACEMENT OF BASE COURSE MATERIALS IN PAVEMENT OR HARD SURFACE AREAS OR CONDUCTING EXCAVATION BELOW SUBGRADE (EBS) ELEVATIONS, CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER TO CONDUCT AN INSPECTION OF THE PREPARED SUBGRADE AND PROOF-ROLLING. PROOF-ROLLING SHALL BE CONDUCTED BY THE CONTRACTOR IN WITNESS OF THE OWNER AND ENGINEER. OWNER AND ENGINEER SHALL DETERMINE IF AREAS OF EBS ARE REQUIRED. EBS SHALL BE COMPLETED BY THE CONTRACTOR PER THE DIRECTION OF THE OWNER AND ENGINEER.

10. SOIL MATERIAL SPECIFICATIONS:
    - 10.1. FILL AND BACKFILL MATERIALS
      - 10.1.1. MATERIAL SHALL BE SATISFACTORY. MATERIALS EXCAVATED FROM THE SITE, PER THE GEOTECHNICAL REPORT, IF SATISFACTORY MATERIALS ARE NOT AVAILABLE ONSITE OR ADDITIONAL MATERIALS ARE REQUIRED, REFER TO IMPORTED FILL MATERIAL SPECIFICATIONS.
    - 10.2. IMPORTED FILL MATERIAL
      - 10.2.1. MATERIAL SHALL BE PROVIDED BY THE CONTRACTOR FROM OFFSITE BORROW AREAS WHEN SUFFICIENT, SATISFACTORY MATERIALS ARE NOT AVAILABLE ONSITE. IMPORTED FILL MATERIAL SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT AND CONSIST OF CLEAN MATERIAL OF INORGANIC SOILS OR A MIXTURE OF INORGANIC SOIL AND ROCK, STONE, OR GRAVEL. THE MATERIAL SHALL BE FREE OF TOPSOIL, VEGETATION, PAVEMENT RUBBLE, DEBRIS, OR OTHER DELETERIOUS MATERIALS. THE MAXIMUM NOMINAL DIMENSION OF MATERIALS CONSISTING OF ROCK, STONE, OR GRAVEL SHALL BE 6".
    - 10.3. GRANULAR FILL
      - 10.3.1. MATERIAL SHALL CONSIST OF CLEAN MATERIAL MEETING THE REQUIREMENTS OF "GRADE 1" OR "GRADE 2" GRANULAR BACKFILL AS DEFINED IN SECTION 209.2.1 OF THE STATE HIGHWAY SPECIFICATIONS.
    - **10.4. BUILDING STRUCTURAL FILL**
      - **10.4.1. CLEAN MATERIAL MEETING THE REQUIREMENTS OF TYPE A "STRUCTURE BACKFILL" AS DEFINED IN SECTIONS 210.2.1 AND 210.2.2. OF THE STATE HIGHWAY SPECIFICATIONS AND GEOTECHNICAL REPORT .**

CONSTRUCTION SITE DEWATERING NOTES

1. ALL CONSTRUCTION SITE DEWATERING PRACTICES SHALL BE IN ACCORDANCE WITH WDNR TECHNICAL STANDARD 1061 FOR PUMPING TO DISCHARGE RATES OF LESS THAN 70 GPM. CONTRACTOR SHALL BE RESPONSIBLE FOR APPLICABLE JURISDICTIONAL DEWATERING PERMITS. FOR DISCHARGE RATES EXCEEDING 70 GPM, CONTRACTOR SHALL BE RESPONSIBLE FOR PERMITTING OF DEWATERING SYSTEM AS A HIGH CAPACITY DEWATERING WELL WITH WDNR AND LOCAL JURISDICTIONS.

2. CONTRACTOR SHALL DISCHARGE TREATED EFFLUENT FROM DEWATERING SYSTEM TO LOCATIONS IN ACCORDANCE WITH WDNR TECHINCAL STANDARD 1061. CONTRACTOR SHALL OBTAIN APPROVAL FROM LOCAL JURISDICTION OR ADJACENT PRIVATE PROPERTY OWNERS FOR ALL DISCHARGES TO JURISDICTION'S PUBLIC INFRASTRUCTURE OR PRIVATE PROPERTY.

3. IN THE EVENT OF DIRTY/UNCLEAR DISCHARGE, CONTRACTOR SHALL HALT PUMPING OPERATIONS AND EVALUATE THE DEWATERING TREATMENT/FILTERING SYSTEM.

4. IN THE EVENT CONTRACTOR FINDS SIGNS OF CONTAMINATION IN THE GROUNDWATER OR SITE SOILS, ALL DEWATERING PRACTICES SHALL BE HALTED AND CONTAMINATION SHALL BE EVALUATED BY A QUALIFIED PROFESSIONAL TO PREVENT TRANSPORTATION OF CONTAMINATES DOWNSTREAM OF DISCHARGES.
   - 4.1. IF DEWATERING PRACTICES CONTINUE WITH CONTAMINATED GROUNDWATER OR SOIL CONDITIONS, THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL REQUIRED PERMITS AND APPROVALS TO CONTINUE OPERATION OF DEWATERING SYSTEMS.
   - 4.2. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR DISCHARGE CONSTRUCTION SITE DEWATERING PRACTICES TO THE SANITARY SEWER WITHOUT AUTHORIZATION AND PERMIT APPROVALS FROM THE LOCAL JURISDICTION.

STORMWATER FACILITIES CONSTRUCTION NOTES

1. ENGINEER SHALL BE NOTIFIED PRIOR TO INSTALLATION OF STORMWATER MANAGEMENT FACILITIES. CONTRACTOR SHALL PROVIDE ENGINEER DOCUMENTATION OF CONSTRUCTION OF STORMWATER FACILITIES INCLUDING GEOTECHNICAL NOTES ON EXISTING SOILS, PHOTOGRAPHS OF EACH STAGE OF BASIN CONSTRUCTION, LOAD TICKETS AND SPECIFICATION OF MATERIALS USED IN THE BASIN, AND ELEVATION OF CRITICAL ITEMS SUCH AS PIPES, EXCAVATIONS, DRAINAGE STONE BOTTOM, ETC.

2. ERECT CONSTRUCTION FENCING OR SNOW FENCING AROUND PROPOSED STORMWATER FACILITIES INTENDED TO INFILTRATE STORMWATER TO PROTECT THESE SOILS FROM DISTURBANCE AND COMPACTION. CONSTRUCTION TRAFFIC, HEAVY EQUIPMENT, AND SOIL STOCKPILES SHALL NOT BE PLACED IN AREAS WHERE PROPOSED INFILTRATE AREAS ARE LOCATED.

3. STORMWATER MANAGEMENT FACILITIES FOR INFILTRATION SHALL BE INSTALLED AFTER SUBSTANTIAL COMPLETION OF FINAL SITE GRADING AND SOILS HAVE BEEN STABILIZED.

4. TEMPORARY SEDIMENT BASINS SHALL BE REMOVED IN THEIR ENTIRETY AFTER CONSTRUCTION OF STORMWATER MANAGEMENT FACILITIES. PERMANENT STORMWATER BASINS USED AS TEMPORARY SEDIMENT BASINS SHALL BE DREDGED TO DESIGN DEPTH AFTER SITE IS STABILIZED.

5. REFER TO PROJECT DETAILS FOR FURTHER INFORMATION AND SPECIFICATIONS FOR THE CONSTRUCTION OF THE STORMWATER FACILITIES.

CONTAMINATED SOILS - NOTICE TO CONTRACTOR

1. THE OWNER/DEVELOPER, **[INSERT OWNER/DEVELOPER NAME]**, COMPLETED TESTING AND ANALYSIS FOR SOILS AND GROUNDWATER CONTAMINATION WITHIN THE PROJECT LIMITS WHERE EXCAVATION IS REQUIRED. TESTING AND ANALYSIS INDICATES THAT:
   - **1.1. [ENTER BRIEF DESCRIPTION OF SOIL/GROUNDWATER CONTAMINANTS ENCOUNTERED]**
   - **1.2. [ENTER BRIEF DESCRIPTION OF SOIL/GROUNDWATER CONTAMINANTS ENCOUNTERED]**

2. TESTING AND ANALYSIS WAS COMPLETED BY THE OWNER/DEVELOPER CONSULTANT, **[NAME OF FIRM]**, AND RESULTS HAVE BEEN DOCUMENTED IN A REPORT TITLED THE FOLLOWING:
   [REPORT TITLE]
   [REPORT SUBTITLE]
   [REPORT SUBTITLE]
   [PROJECT NAME/ADDRESS/LOCATION]
   [REPORT ISSUANCE DATE AND/OR REVISIONS]

3. PROPER HANDLING AND DISPOSAL OF ENCOUNTERED CONTAMINATED MATERIALS IS SHALL BE IN ACCORDANCE WITH THE PROJECT'S MATERIAL MANAGEMENT PLAN (MMP). IF CONTRACTOR ENCOUNTERS ANY OTHER SOIL OR GROUNDWATER CONTAMINATION NOT PREVIOUSLY FOUND IN TESTING OR ANALYSES, CONTRACTOR SHALL SUSPEND EXCAVATION ACTIVITIES IN THE AREA AND CONSULT WITH THE OWNER/DEVELOPER.,

4. CONTRACTOR(S) TAKING PART IN ACTIVITIES THAT WILL RESULT IN THE REASONABLE PROBABILITY OF EXPOSURE TO SAFETY AND HEALTH HAZARDS ASSOCIATED WITH HAZARDOUS MATERIALS SHALL HAVE COMPLETED HEALTH AND SAFETY TRAINING THAT MEETS O.S.H.A. REQUIREMENTS FOR HAZARDOUS WASTE AND EMERGENCY RESPONSE (H.A.Z.W.O.P.E.R.) AS PROVIDED IN 29 CFR 1910.120. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING SITE-SPECIFIC HEALTH AND SAFETY PLAN AND DEVELOP, DELINEATE, AND ENFORCE THE HEALTH AND SAFETY EXCLUSION ZONES FOR EACH CONTAMINATED SITE LOCATIONS AS REQUIRED BY 29 CFR 1910.120.

5. FOR FURTHER INFORMATION REGARDING PREVIOUS INVESTIGATION AND REMEDIATION ACTIVITIES AT THIS SITE, CONTACT:
   [OWNER/DEVELOPER NAME]
   [OWNER/DEVELOPER CONTACT INFO]
   [OWNER/DEVELOPER CONTACT INFO]
   [OWNER/DEVELOPER CONTACT INFO]
   [OWNER/DEVELOPER CONTACT INFO]

DEMOLITION NOTES CONTAMINATED SOILS

1. REFER TO MATERIAL HANDLING PLAN FOR SOIL DISPOSAL. THREE CLASSES OF MATERIALS HAVE BEEN IDENTIFIED ON THE SUBJECT PROPERTY AND ARE DESCRIBED AS FOLLOWS:
   - 1.1. CLASS I MATERIAL
     - **1.1.1. [GENERAL DESCRIPTION OF MATERIAL COMPOSITION AND CONTAMINATION TYPES]. THE MATERIAL IS REGULATED BY THE STATE OF WISCONSIN AND REQUIRES DISPOSAL AT A LICENSED LANDFILL FACILITY.**
   - 1.2. CLASS II MATERIAL
     - **1.2.1. [GENERAL DESCRIPTION OF MATERIAL COMPOSITION AND CONTAMINATION TYPES]. THE MATERIAL IS REGULATED BY THE STATE OF WISCONSIN AND REQUIRES DISPOSAL AT A LICENSED LANDFILL FACILITY.**
   - 1.3. CLASS III MATERIAL
     - 1.3.1. SHALL **CONSIST OF NATURAL SOILS CONTAINING NO EVIDENCE OF FILL, CONSTRUCTION RUBBLE, CONCRETE, FOUNDRY SAND, SLAG, ASPHALT, AND/OR CONTAMINATION BASED ON VISUAL FIELD OBSERVATIONS AND/OR PREVIOUS DATA OF SOIL COLLECTED FROM THE AREA(S) FROM WHICH THIS MATERIAL IS BEING REMOVED. ROUTINE FIELD OBSERVATIONS/SCREENING WILL ALSO BE PERFORMED TO CONFIRM THE SOIL QUALITY. THIS MATERIAL WILL LIKELY BE ABLE TO BE REUSED ONSITE.**

2. THE STOCKPILING OF EACH CLASS OF MATERIALS SHALL BE AS FOLLOWS:
   - 2.1. CLASS I/II MATERIAL
     - **2.1.1. MATERIAL SHALL BE PLACED IN A TEMPORARY WASTE DUMPSTER OR WITHIN THE BED OF A WASTE HAULING VEHICLE PERMITTED TO HAUL SPECIAL WASTES. ONCE FILLED, ALL SUCH HOLDING CONTAINERS WILL BE COVERED WITH AN IMPERVIOUS MATERIAL. ALTERNATIVELY, CLASS I AND II MATERIAL MAY BE TEMPORARILY STOCKPILED ONSITE. ALL STOCKPILED CLASS I AND II MATERIAL MUST BE PLACED ON AND ALSO COVERED WITH AN IMPERVIOUS MATERIAL.**
   - 2.2. CLASS III MATERIAL
     - **2.2.1. MATERIAL TEMPORARILY STOCKPILE(S) WILL BE MANAGED USING STANDARD EROSION CONTROL MEASURES REQUIRED AT CONSTRUCTION SITES. THE CLASS III MATERIAL MAY BE TREATED AS CLEAN FILL AND MAY BE REUSED ONSITE WHERE POSSIBLE.**

3. WASTE MANIFESTS WILL BE REQUIRED FOR ALL SOLID WASTE MATERIALS DISPOSED AT A LICENSED LANDFILL FACILITY. THE DISPOSAL OF EACH CLASS OF MATERIALS SHALL BE AS FOLLOWS:
   - 3.1. CLASS I/II MATERIAL
     - **3.1.1. MATERIAL SHALL CONSIST OF CONTAMINATED FILL/SOIL SAND WILL BE TREATED AS "CONTAMINATED SOIL." THIS MATERIAL IS REGULATED BY THE STATE OF WISCONSIN AND REQUIRES DISPOSAL AT A LICENSED LANDFILL RECYCLING AND DISPOSAL FACILITY. THIS MATERIAL MAY BE DISPOSED AT [DEFINE LANFILL LOCATION, IF KNOWN]**
   - 3.2. CLASS III MATERIAL
     - **3.2.1. MATERIAL SHALL CONSIST OF NON-CONTAMINATED FILL SOILS AND/OR NATURAL SOILS, TOPSOIL, AND/OR GRAVEL SUBBASE LOCATED UNDER PAVEMENT AREAS. THIS MATERIAL MAY BE TREATED AS CLEAN FILL AND IS TO BE REUSED ONSITE WHERE POSSIBLE.**

4. **EXISTING METHANE MONITORING WELLS SHALL BE PRESERVED. IF MONITORING WELLS ARE IN CONFLICT WITH PROPOSED CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY [ENVIRONMENTAL CONSULTANT FIRM NAME & CONTACT INFORMATION]**

5. **DEWATERING EFFLUENT MAY BE DISCHARGED TO [LOCATION DESCRIPTION]. REFER TO [PERMIT NUMBER/APPROVAL REFERENCE] FOR PERMIT CONDITIONS. CONTACT [JURISDICTIAL/UTILITY CONTRACT ENTITY AND CONTACT INFORMATION]**

LEGEND

- PROPERTY LINE
- EASEMENT LINE
- BUILDING SETBACK LINE
- DEMOLITION – SAWCUT EXISTING PAVEMENT
- DEMOLITION – REMOVAL OF CURB AND GUTTER
- DEMOLITION – SAWCUT HEAD OF CURB AND GUTTER
- DEMOLITION – REMOVAL OF ASPHALT AND BASE
- DEMOLITION – REMOVAL OF CONCRETE AND BASE
- DEMOLITION – REMOVAL OF GRAVEL
- DEMOLITION – REMOVAL OF UTILITIES
- DEMOLITION – CLEAR AND GRUB
- PROTECT EXISTING TREE
- EDGE OF PAVEMENT
- STANDARD CURB AND GUTTER
- REJECT CURB AND GUTTER
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- HEAVY DUTY CONCRETE PAVEMENT
- PROPOSED 1 FOOT CONTOUR
- PROPOSED 5 FOOT CONTOUR
- EXISTING 1 FOOT CONTOUR
- EXISTING 5 FOOT CONTOUR
- DRAINAGE DIRECTION
- GRADE BREAK
- STORMWATER MANAGEMENT AREA
- RETAINING WALL
- BOULDER WALL
- FENCE
- LIGHT POLE (REFER TO PHOTOMETRIC PLAN)
- SANITARY SEWER
- WATERMAIN
- STORM SEWER
- 8'x4'x4" INSULATION (PLAN VIEW)
- 8'x4'x4" INSULATION (PROFILE VIEW)
- SILT FENCE
- RIP-RAP
- CONSTRUCTION ENTRANCE
- EROSION MATTING
- DITCH CHECK
- FRAMED INLET PROTECTION
- SPOT ELEVATION
  - EP – EDGE OF PAVEMENT
  - FG – FINISH GRADE
  - EC – EDGE OF CONCRETE
  - EX – MATCH EXISTING GRADE
  - SW – SIDEWALK

FG: 1068.56

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CLIENT:
FITCHBURG PARTNERS, LLC.

CLIENT ADDRESS:
80 OTTAWA AVE. NW, SUITE 410
GRAND RAPIDS, MI 49503

PROJECT:
JAMESTOWN QUARRY

PROJECT LOCATION:
2975 KAPEC ROAD
DANE COUNTY
FITCHBURG, WI 53719

PLAN MODIFICATIONS:

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Designed By: MSS
Reviewed By:
Approved By: CD

SHEET TITLE:
NOTES AND LEGEND

SHEET NUMBER:
C1.1

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SHEET TITLE:
DEMOLITION PLAN

SHEET NUMBER:
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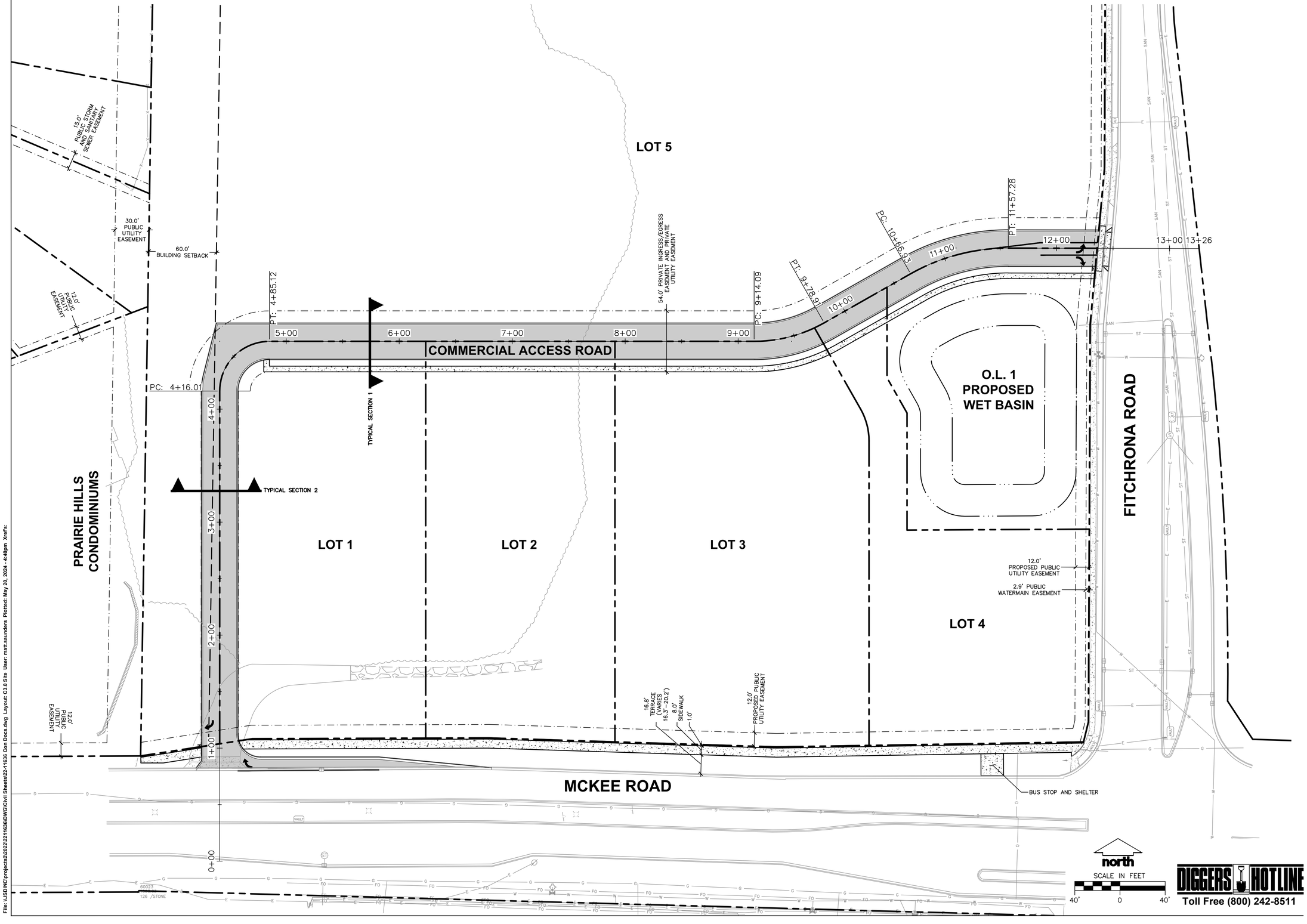

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SHEET TITLE:
SITE PLAN

SHEET NUMBER:
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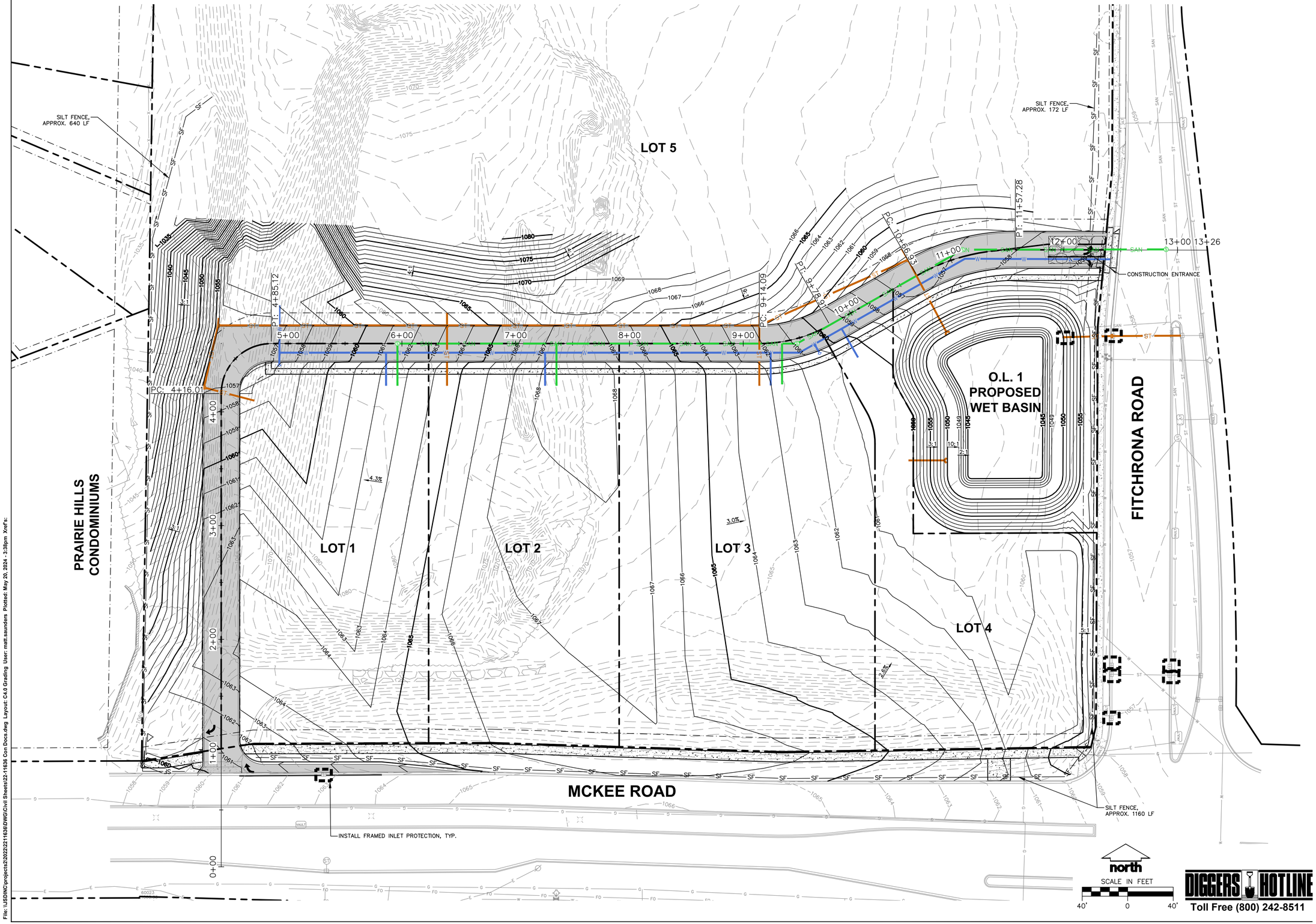

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Designed By: MSS
Reviewed By:
Approved By: CD

SHEET TITLE:
GRADING AND EROSION CONTROL PLAN

SHEET NUMBER:
C4.0

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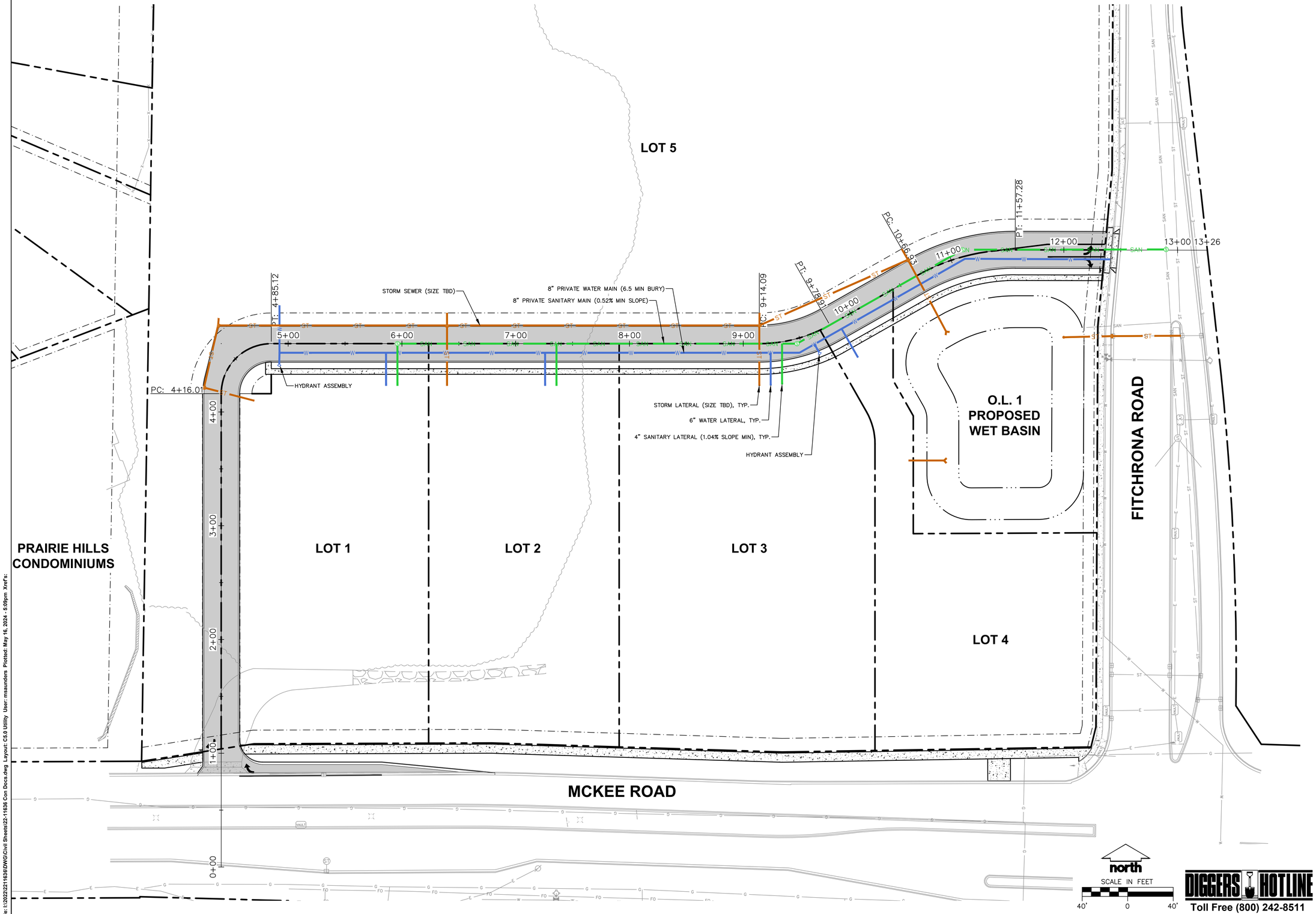

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SHEET TITLE:
UTILITY PLAN

SHEET NUMBER:
C5.0

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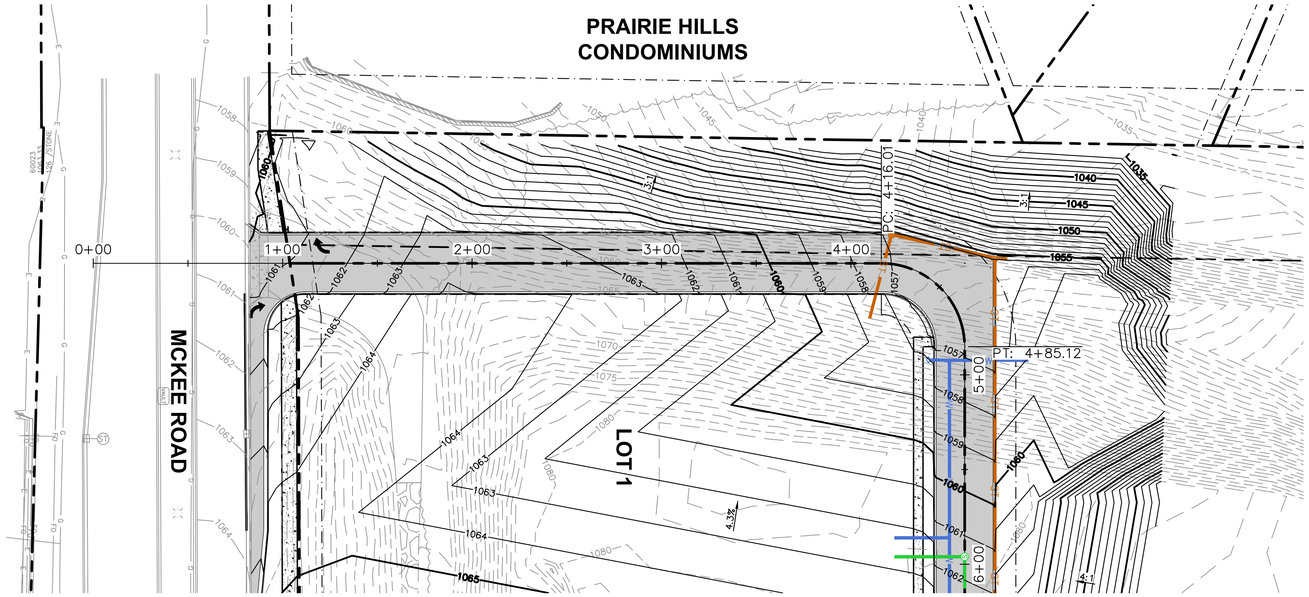

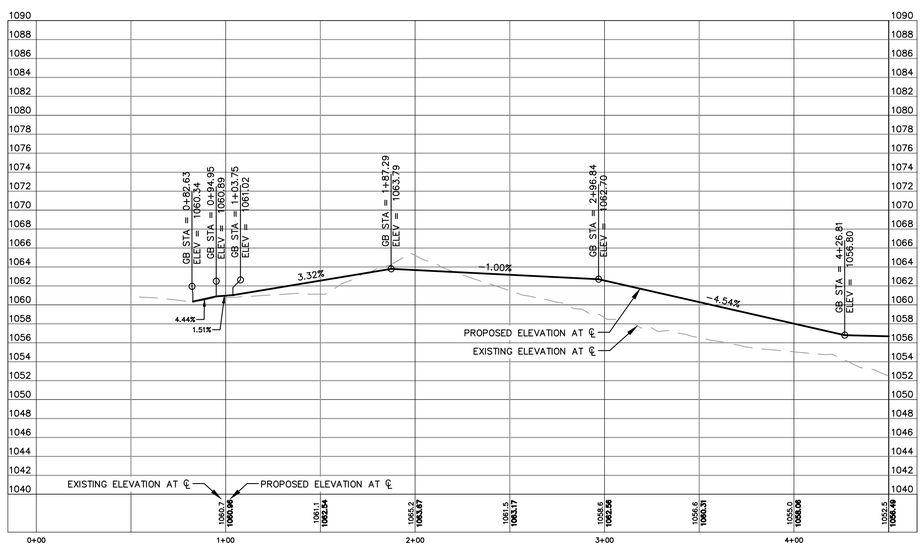

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22x34 = 40 SCALE
11x17 = 80 SCALE

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PROJECT:
JAMESTOWN QUARRY

PROJECT LOCATION:
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Designed By: MSS
Reviewed By:
Approved By: CD

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STREET PLAN AND PROFILE

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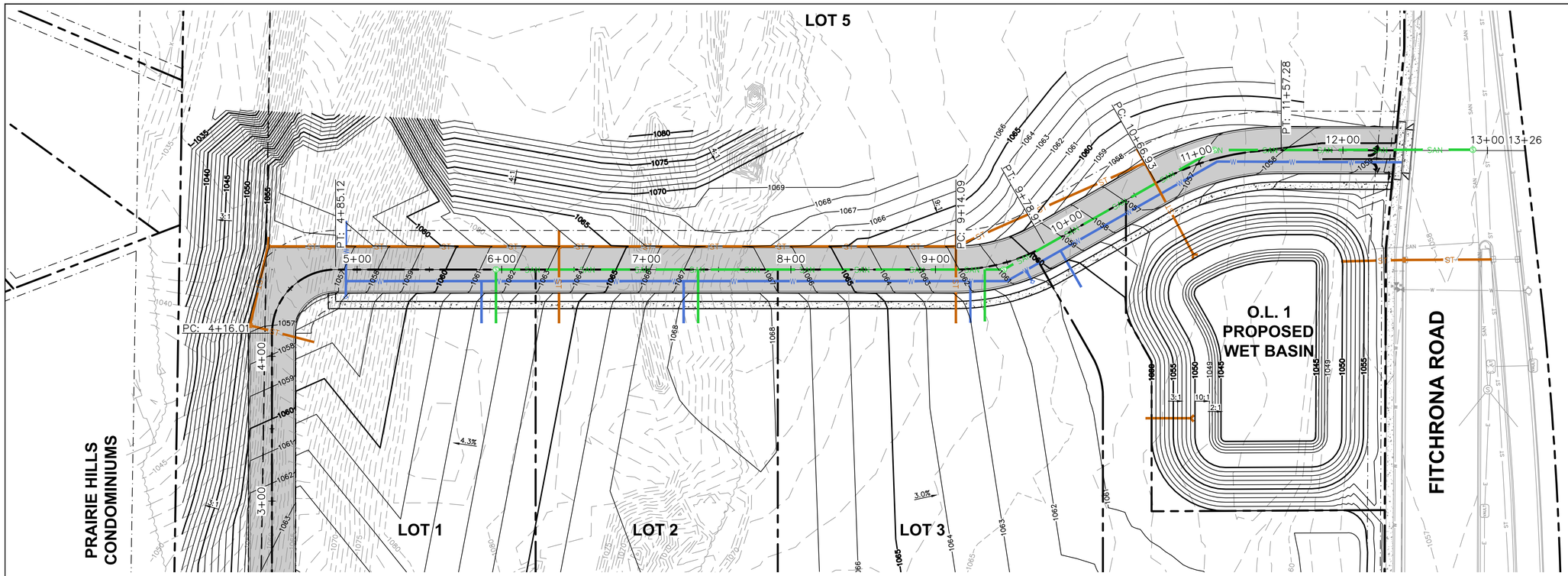

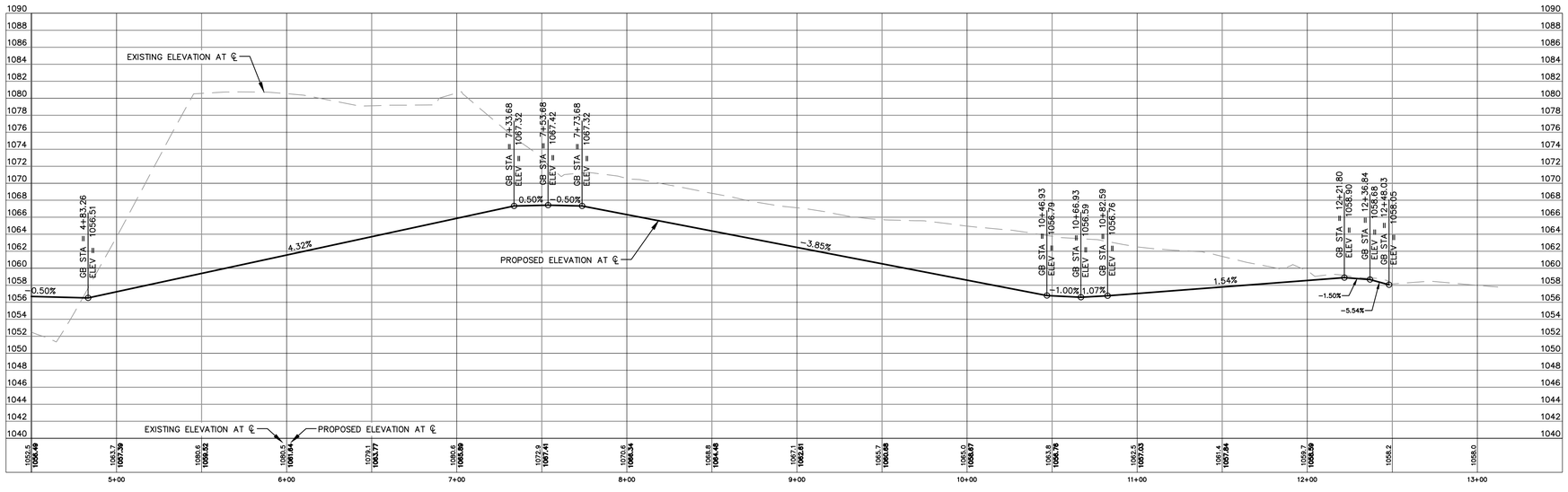

north

SCALE IN FEET
0 8 40 80
22x34 = 40 SCALE
11x17 = 80 SCALE

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jsdinc.com
MADISON REGIONAL OFFICE
507 WEST VERONA AVENUE, SUITE 500
VERONA, WISCONSIN 53593
P. 608.848.5060

CLIENT:
FITCHBURG PARTNERS, LLC.

CLIENT ADDRESS:
80 OTTAWA AVE. NW, SUITE 410
GRAND RAPIDS, MI 49503

PROJECT:
JAMESTOWN QUARRY

PROJECT LOCATION:
2975 KAPEC ROAD
DANE COUNTY
FITCHBURG, WI 53719

PLAN MODIFICATIONS:

#	Date:	Description:
1	05.21.24	PRELIMINARY PLAT
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Designed By: MSS
Reviewed By:
Approved By: CD

SHEET TITLE:
STREET PLAN AND PROFILE

SHEET NUMBER:
C6.1

JSD PROJECT NO: 22-11636

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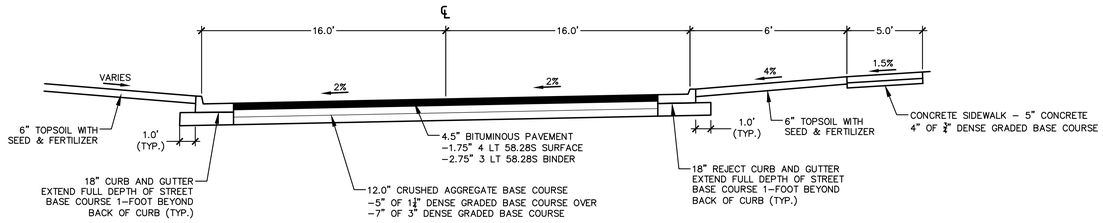
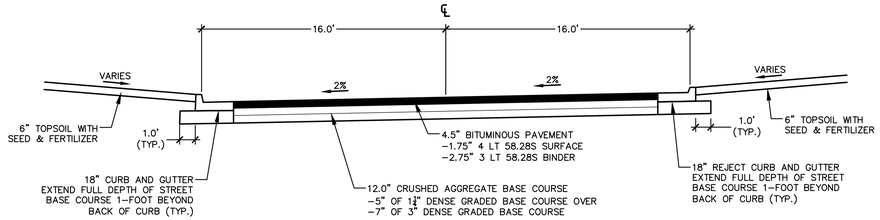


TYPICAL SECTION 1



TYPICAL SECTION 2

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Designed By: MSS
Reviewed By:
Approved By: CD

SHEET TITLE:
DETAILS - TYPICAL SECTIONS

SHEET NUMBER:
C7.0

JSD PROJECT NO: 22-11636

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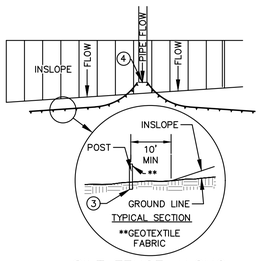
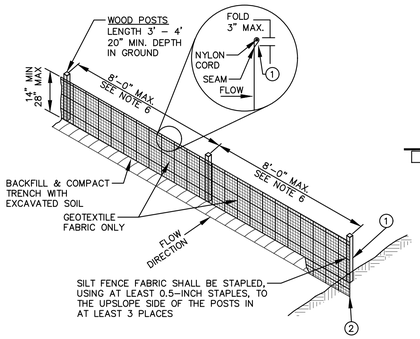
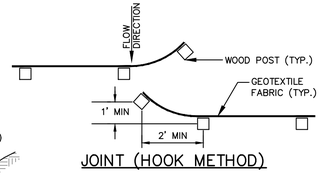
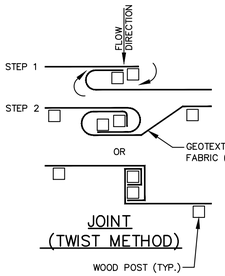


SILT FENCE ALONG SLOPES & OUTFALLS

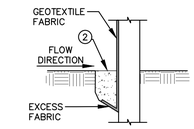




JOINT (HOOK METHOD)

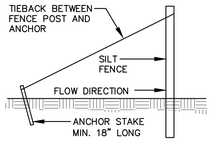


JOINT (TWIST METHOD)



NOTE:
ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS.

TRENCH DETAIL



SILT FENCE TIE BACK
(WHEN ADDITIONAL SUPPORT REQUIRED)

GENERAL NOTES:

1. SILT FENCE SHALL BE ANCHORED BY SPREADING AT LEAST 8-INCHES OF FABRIC IN A 4-INCH WIDE AND 6-INCH DEEP TRENCH OR 6-INCH DEEP V-TRENCH ON THE UPSLOPE SIDE OF THE FENCE. TRENCHES SHALL NOT BE EXCAVATED WIDER OR DEEPER THAN NECESSARY FOR PROPER INSTALLATION.
2. FOLD MATERIAL TO FIT TRENCH AND BACKFILL AND COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1.125-INCHES x 1.125-INCHES OF DRIED OAK OR HICKORY.
4. SILT FENCE TO EXTEND ABOVE THE TOP OF PIPE.
5. SILT FENCE CONSTRUCTION AND GEOTEXTILE FABRIC SHALL CONFORM TO WDNR TECHNICAL STANDARD 1056.
6. POST SPACING SHALL BE SELECTED BASED ON GEOTEXTILE FABRIC (8-FEET FOR WOVEN & 3-FEET FOR NON-WOVEN)

SILT FENCE

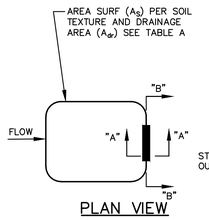
N.T.S.

REV. 7-01-2019

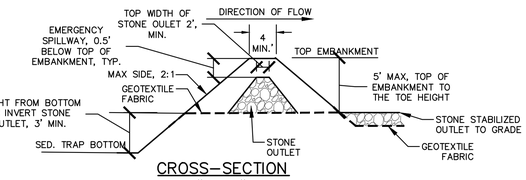
TABLE A:

SEE TEXTURE	
COURSE (SAND, LOAMY SAND, SANDY LOAM)	$A_S = 625*A_{dr}$
MEDIUM (LOAMS, SILT, SILTY LOAM)	$A_S = 1560*A_{dr}$
FINE (SANDY CLAY, SILTY CLAY, SILTY CLAY LOAM, CLAY)	$A_S = 5300*A_{dr}$

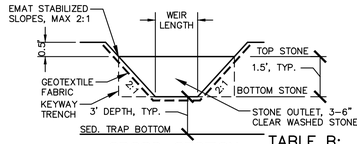
NOTES:
- ASSUME DRAINAGE AREA (A_{dr}) TO NEAREST 0.1 ACRES
- SURFACE AREA (A_S) IN SQUARE FEET



PLAN VIEW



CROSS-SECTION "A-A"



CROSS-SECTION "B-B"

NOTES:
1. REFER TO WDNR STORM WATER CONSTRUCTION TECHNICAL STANDARD NO. 1063, CURRENT EDITION FOR FURTHER DETAILS AND PROVISIONS FOR CONSTRUCTION, MAINTENANCE, AND OTHER CONSIDERATIONS

TABLE B:

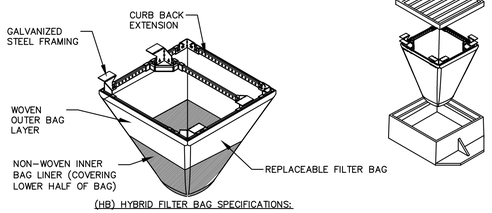
DRAINAGE AREA (A_{dr}) (acres)	WEIR LENGTH (FT)
1	4
2	6
3	8
4	10
5	12

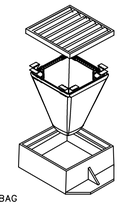
SEDIMENT TRAP

N.T.S.

REV. 3-17-2023

FLEXSTORM INLET FILTERS TO MEET DANE COUNTY EROSION CONTROL STANDARDS





(HB) HYBRID FILTER BAG SPECIFICATIONS:

INSTALLATION INSTRUCTIONS:
1. REMOVE GRATE FROM THE DRAINAGE STRUCTURE
2. CLEAN STONE AND DIRT FROM LEDGE (LIP) OF DRAINAGE STRUCTURE
3. DROP THE INLET FILTER THROUGH THE CLEAR OPENING SUCH THAT THE HANGERS REST FIRMLY ON THE LIP OF THE STRUCTURE
4. REPLACE THE GRATE AND CONFIRM IT IS NOT ELEVATED MORE THAN 1/8"

MAINTENANCE GUIDELINES:
1. EMPTY THE SEDIMENT BAG IF MORE THAN HALF FILLED WITH SEDIMENT AND DEBRIS
2. REMOVE THE GRATE, ENGAGE THE LIFTING POINTS, AND LIFT FILTER FROM THE DRAINAGE STRUCTURE.
3. DISPOSE OF SEDIMENT AND DEBRIS BY THE ENGINEERING OR MAINTENANCE CONTRACT 4. ALTERNATIVELY, AN INDUSTRIAL VACUUM CAN BE USED TO COLLECT SEDIMENT FROM THE FILTER BAG

CATCH-IT INLET FILTER (Temporary Inlet Protection)

Neenah Casting	Inlet Type	Grate Size	Opening Size	Bag Cap (ft^3)	Flow Ratings (CFS)		ADS P/N
					HB (Hybrid Bag)	Bypass	
3067	Curb Box	35.25 x 17.75	33.0 x 15.0	4.4	2.0	5.8	62LCBEXTHB
3246A	Curb Box	35.75 x 23.875	33.5 x 21.0	4.2	1.1	3.3	62LCB3624HB
3030	Square/Rect (SQ)	23 x 16	20.5 x 13.5	1.6	0.7	2.2	62MCB2316HB
3067-C	Square/Rect (SQ)	35.25 x 17.75	33 x 15	3.2	1.0	5.2	62LSQ3618HB
R-2501	Round (RD)	~26	~24	2.3	0.8	5.2	62MRD26HB
R-1772/2560	Round (RD)	22.25-23.5	20.5-21	1.5	0.6	4.6	62MRD22HB

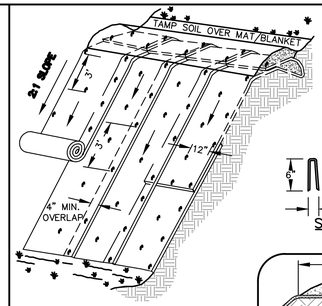
Woven and Non-Woven Geotextile Filter Bag Properties (Minimum Average Roll Values)

PROPERTY	TEST METHOD	WOVEN (OUTER)	NON-WOVEN (LINER)
TENSILE STRENGTH	ASTM D4632	350 x 225 Lbs	100 Lbs
ELONGATION	ASTM D4632	20% x 15%	50%
CBR PUNCTURE	ASTM D6241	1000 Lbs	65 Lbs
TRAPEZOIDAL TEAR	ASTM D4533	110 x 75 Lbs	45 Lbs
UV RESISTANCE	ASTM D4355	90%	70%
OPENING SIZE (AOS)	ASTM D4751	20 US STD SIEVE	40 US STD SIEVE
PERMITTIVITY	ASTM D4491	$1.5\ Sec^{-1}$	$2.0\ Sec^{-1}$
WATER FLOW RATE	ASTM D4491	200 gpi/min/ft^2	145 gpi/min/ft^2
MINIMUM FILTER BAG VOLUME		2 CUBIC FT	

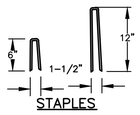
FRAMED INLET PROTECTION

N.T.S.

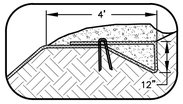
REV. 7-01-2019



NOTE:
MATS/BLANKETS SHOULD BE INSTALLED VERTICALLY DOWNSLOPE.



STAPLES



BERM

ISOMETRIC VIEW TYPICAL SLOPE SOIL STABILIZATION

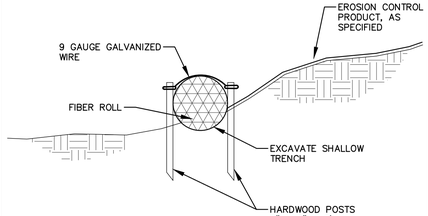
GENERAL NOTES:

1. EROSION MAT CONSTRUCTION SHALL BE IN ACCORDANCE WITH WISCONSIN DNR TECHNICAL STANDARD 1052 "NON-CHANNEL EROSION MAT".
2. ONLY WisDOT EROSION CONTROL PRODUCT ACCEPTABILITY LIST (PAL) APPROVED MATS SHALL BE ALLOWED. REFER TO EROSION CONTROL PLAN FOR EXACT MAT CLASSIFICATION.
3. APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS.
4. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.

EROSION MATTING

N.T.S.

REV. 11-19-2018



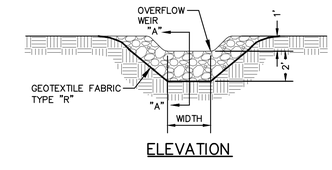
GENERAL NOTES:

1. EXCAVATE A SHALLOW TRENCH SLIGHTLY BELOW BASEFLOW OR A 4" TRENCH ON SLOPE CONTOURS.
2. PLACE THE ROLL IN THE TRENCH AND ANCHOR WITH 2" X 2" POSTS PLACED ON BOTH SIDES OF THE ROLL AND SPACED LATERALLY ON 2' TO 4' CENTERS. TRIM THE TOP OF THE POSTS EVEN WITH THE EDGE OF THE ROLL, IF NECESSARY.
3. NOTCH THE POSTS AND TIE TOGETHER, ACROSS THE ROLL, WITH 9 GAUGE GALVANIZED WIRE OR 1/8" DIAMETER BRAIDED NYLON ROPE.
4. PLACE SOIL EXCAVATED FROM THE TRENCH BEHIND THE ROLL AND HAND TAMP. PLANT WITH SUITABLE HERBACEOUS OR WOODY VEGETATION AS SPECIFIED.

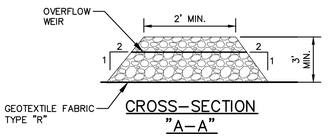
FIBER SILT SOCK

N.T.S.

REV. 12-7-2018



ELEVATION



CROSS-SECTION "A-A"

GENERAL NOTES:

1. STONE DITCH CHECKS SHALL BE CONSTRUCTED OF A WELL-GRADED ANGULAR STONE, A D50 OF 3 INCH DIAMETER OR GREATER, SOMETIMES REFERRED TO AS BREAKER RUN OR SHOT ROCK.
2. EXTEND DITCH CHECK ACROSS CHANNEL OPENING TO MEET SWALE/DITCH SIDE SLOPES. WHERE CHANNEL IS LESS THAN 3 FEET DEEP, REDUCE WEIR HEIGHT TO 1 FOOT AND INCREASE THE TOP OF DITCH CHECK FROM 2 FEET TO 4 FEET.

STONE DITCH CHECK

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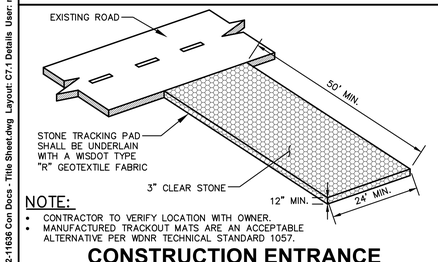
REV. 7-31-2018

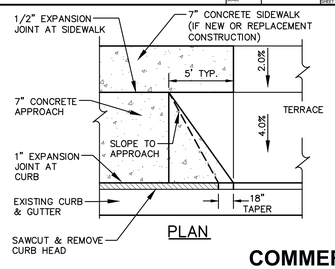


NOTE:
- CONTRACTOR TO VERIFY LOCATION WITH OWNER.
- MANUFACTURED TRACKOUT MATS ARE AN ACCEPTABLE ALTERNATIVE PER WDNR TECHNICAL STANDARD 1057.

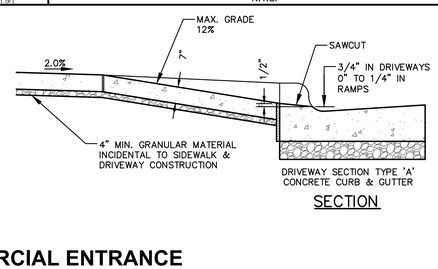
CONSTRUCTION ENTRANCE

N.T.S.

REV. 04-24-2024



PLAN



SECTION

COMMERCIAL ENTRANCE

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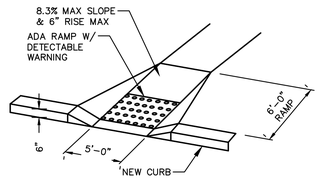
REV. 2-12-2021



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N.T.S.

REV. 11-20-2018

FLEXSTORM CATCH IT

TECH	DRAWN BY	CHECKED
C		

APPROVED: IPP Flexstorm HD Specifications

SHEET 1 OF 1

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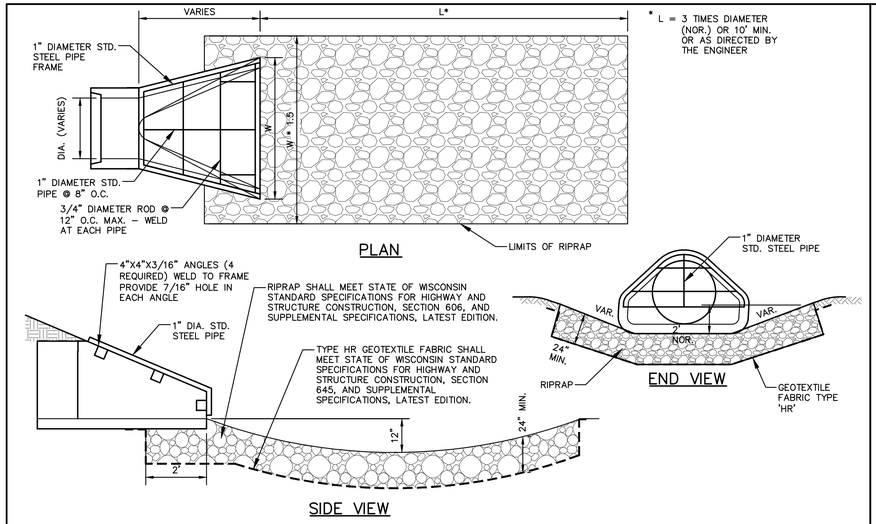
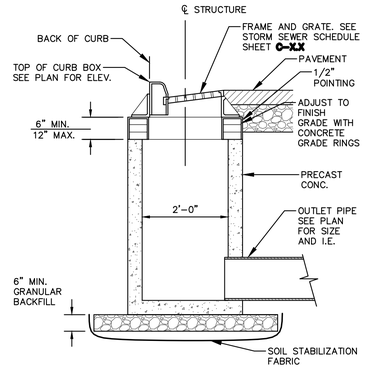


APRON ENDWALL W/ GRATE - RIPRAP

N.T.S.

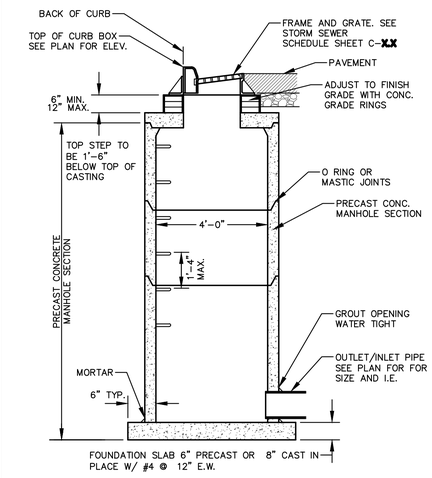
REV. 12-7-2018



STORM INLET

N.T.S.

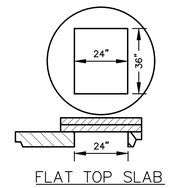
REV. 11-26-2018



4' CATCH BASIN (CURB INLET)

N.T.S.

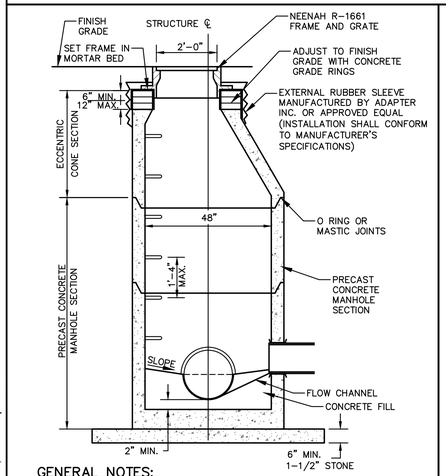
REV. 12-7-2018



FLAT TOP SLAB

GENERAL NOTES:

1. MANHOLE CONSTRUCTION TO MEET REQUIREMENTS OF ASTM C478.
2. PROVIDE FLAT TOP SLAB FOR MANHOLES 5' OR LESS IN DEPTH. FLAT TOP SLABS TO BE IN-BELL TYPE.
3. JOINTS SHALL BE WATERTIGHT. USE BUTYL RUBBER GASKET.
4. USE MORTAR FOR PIPE CONNECTIONS.



GENERAL NOTES:

1. MANHOLE CONSTRUCTION TO MEET REQUIREMENTS OF ASTM C478.
2. JOINTS SHALL BE WATERTIGHT. USE BUTYL RUBBER GASKET.
3. USE MORTAR FOR PIPE CONNECTIONS.
4. ALL MANHOLES SHALL HAVE RUBBER CHIMNEY BOOT SEALS.

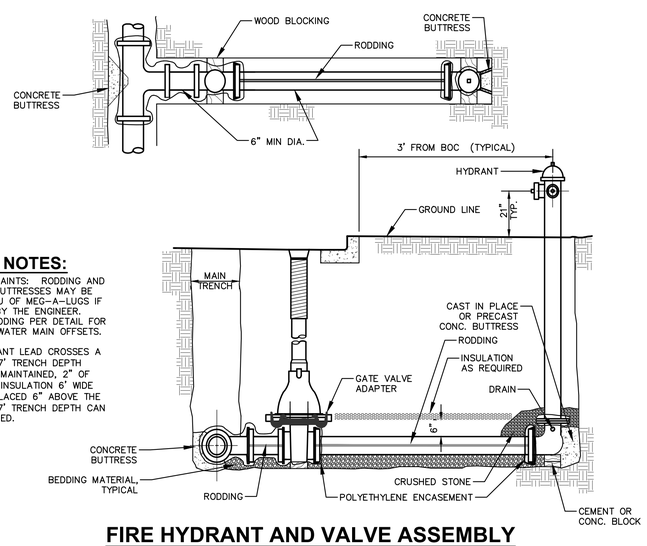
SANITARY SEWER MANHOLE

N.T.S.

REV. 12-6-2018

GENERAL NOTES:

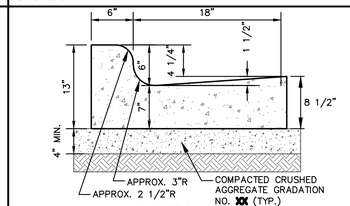
1. JOINT RESTRAINTS: RODDING AND CONCRETE BUTTRESSES MAY BE USED IN LIEU OF MEG-A-LUGS IF APPROVED BY THE ENGINEER. PROVIDE RODDING PER DETAIL FOR STRAPPING WATER MAIN OFFSETS.
2. WHEN HYDRANT LEAD CROSSES A DITCH & A 7' TRENCH DEPTH CANNOT BE MAINTAINED, 2" OF STYROFOAM INSULATION 6' WIDE SHALL BE PLACED 6" ABOVE THE PIPE UNTIL 7' TRENCH DEPTH CAN BE MAINTAINED.



FIRE HYDRANT AND VALVE ASSEMBLY

N.T.S.

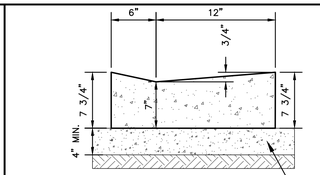
REV. 12-03-2018



24" STANDARD CURB & GUTTER

N.T.S.

REV. 11-20-2018



18" DRIVEWAY SECTION CURB & GUTTER

N.T.S.

REV. 11-19-2018

18" STANDARD CURB & GUTTER

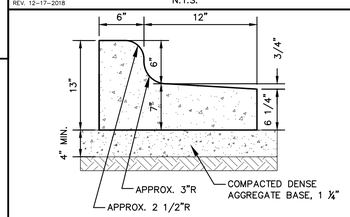
N.T.S.

REV. 12-17-2018

CONCRETE INLET COLLAR

N.T.S.

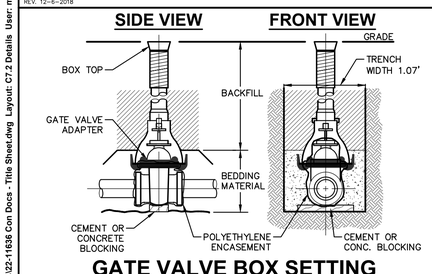
REV. 11-20-2018



18" REJECT CURB & GUTTER

N.T.S.

REV. 12-17-2018



GATE VALVE BOX SETTING

N.T.S.

REV. 12-04-2018

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jsdinc.com
MADISON REGIONAL OFFICE
507 WEST VERONA AVENUE, SUITE 500
VERONA, WISCONSIN 53593
P. 608.848.5060

CLIENT:
FITCHBURG PARTNERS, LLC.

CLIENT ADDRESS:
80 OTTAWA AVE. NW, SUITE 410
GRAND RAPIDS, MI 49503

PROJECT:
JAMESTOWN QUARRY

PROJECT LOCATION:
2975 KAPEC ROAD
DANE COUNTY
FITCHBURG, WI 53719

PLAN MODIFICATIONS:

#	Date:	Description:
1	05.21.24	PRELIMINARY PLAT
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3		
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15		

Designed By: MSS
Reviewed By:
Approved By: CD

SHEET TITLE:
DETAILS

SHEET NUMBER:
C7.2

JSD PROJECT NO: 22-11636

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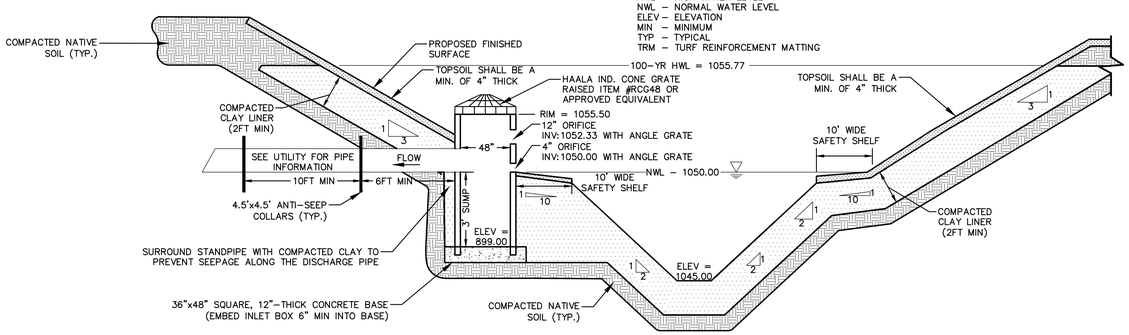
DETAIL ABBREVIATIONS:

HWL – HIGH WATER LEVEL
NWL – NORMAL WATER LEVEL
ELEV – ELEVATION
MIN – MINIMUM
TYP – TYPICAL
TRM – TURF REINFORCEMENT MATTING



GENERAL NOTES:

1. ALL CONSTRUCTION SHALL MEET THE SPECIFICATIONS OF "WDNR WET DETENTION BASIN TECHNICAL STANDARD 1001".
2. ALL WORK TO BE CONDUCTED IN CONFORMANCE WITH THE STORM WATER MANAGEMENT PLAN FOR THE PROJECT SITE AS APPROVED BY THE REGULATORY ENGINEER OF RECORD.
3. OWNER OR CONTRACTOR MUST CONSULT LANDSCAPE ARCHITECT OR ECOLOGICAL PLANNING AGENCY FOR APPROPRIATE PLANTS AND PLANTING CONFIGURATIONS.
4. CLAY LINER SHALL BE A MINIMUM OF 2-FEET THICK. CLAY SHALL BE COMPACTED AT ±2.0% OPTIMAL MOISTURE CONTENT TO 90% MODIFIED PROCTOR. MEDIUM STIFF TO STIFF CLAYS PRESENT IN-PLACE AT THE POND SIDE SLOPES OR BOTTOM OR OTHER ONSITE MEDIUM STIFF TO STIFF CLAYS MAY BE USED AT THE DISCRETION OF THE GEOTECHNICAL ENGINEER OF RECORD.
5. FOR CONSTRUCTED EMBANKMENTS WHERE THE PERMANENT POOL IS PONDED 3-FEET OR MORE AGAINST THE EMBANKMENT, THERE SHALL BE A CORE TRENCH OR KEYWAY ALONG THE CENTERLINE OF THE EMBANKMENT UP TO THE PERMANENT POOL ELEVATION. THE CORE TRENCH OR KEYWAY SHALL BE A MINIMUM OF 2-FEET DEEP AND 8-FEET WIDE WITH A SIDE SLOPE OF 1:1 OR FLATTER.
6. CONTRACTOR SHALL POSITION ANTI-SEEP COLLAR SUCH THAT THE COLLARS ARE COMPLETELY CONTAINED WITHIN EMBANKMENT.
7. CONTRACTOR SHALL FIT STANDPIPE WITH REMOVABLE CONSTRUCTION ORIFICE PLATE OVER THE PERMANENT DEWATERING ORIFICE. THE CONSTRICTION ORIFICE SHALL REMAIN IN PLACE UNTIL 70% VEGETATION IS ESTABLISHED OVER THE CONTRIBUTING AREA OF THE POND.
8. IMMEDIATELY INSTALL FILTER FABRIC OVER ALL OUTLETS TO PREVENT SEDIMENT DEPOSITION IN THE PIPING. (REMOVE FOLLOWING CONTRIBUTING AREA STABILIZATION)
9. THE TRASH GRATE OVER THE PERMANENT DEWATERING ORIFICE SHALL BE ADDED FOLLOWING REMOVAL OF THE CONSTRUCTION ORIFICE.

NOTE:

THE STORMWATER MANAGEMENT FEATURES CONTAINED WITHIN THIS PLAN SET HAVE BEEN DESIGNED IN ACCORDANCE WITH APPLICABLE STANDARDS SET FORTH IN WISCONSIN DNR NR151 AND LOCAL ORDINANCES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE PROPER CONSTRUCTION PRACTICES HAVE BEEN UTILIZED AND THAT STORMWATER MANAGEMENT FEATURES HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH APPROVED DESIGN PLANS. JSD PROFESSIONAL SERVICES, INC. (JSD) SHALL NOT BE LIABLE FOR ANY CONSTRUCTION PRACTICES OR INSTALLATION WHICH DEVIATES FROM THE APPROVED PLAN SET. ONCE THE OWNER HAS PROVIDED FINAL APPROVAL TO THE WORK PERFORMED BY THE CONTRACTOR AND ENSURED COMPLIANCE WITH THE PLAN, IT IS THE OWNER'S RESPONSIBILITY TO MAINTAIN STORMWATER MANAGEMENT FEATURES IN ACCORDANCE WITH THE RECORDED MAINTENANCE AGREEMENT. PROPER OPERATION IS DEPENDENT ON A MULTITUDE OF VARIABLES INCLUDING WEATHER. THESE COMPONENTS REQUIRE ONGOING MAINTENANCE FOR WHICH THE OWNER IS RESPONSIBLE. JSD TAKES NO RESPONSIBILITY FOR PROPER OPERATION OF THE WATER QUALITY COMPONENTS.

WET BASIN CROSS SECTION

N.T.S.

JSD
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VERONA, WISCONSIN 53593
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DETAILS

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JSD PROJECT NO: 22-11636

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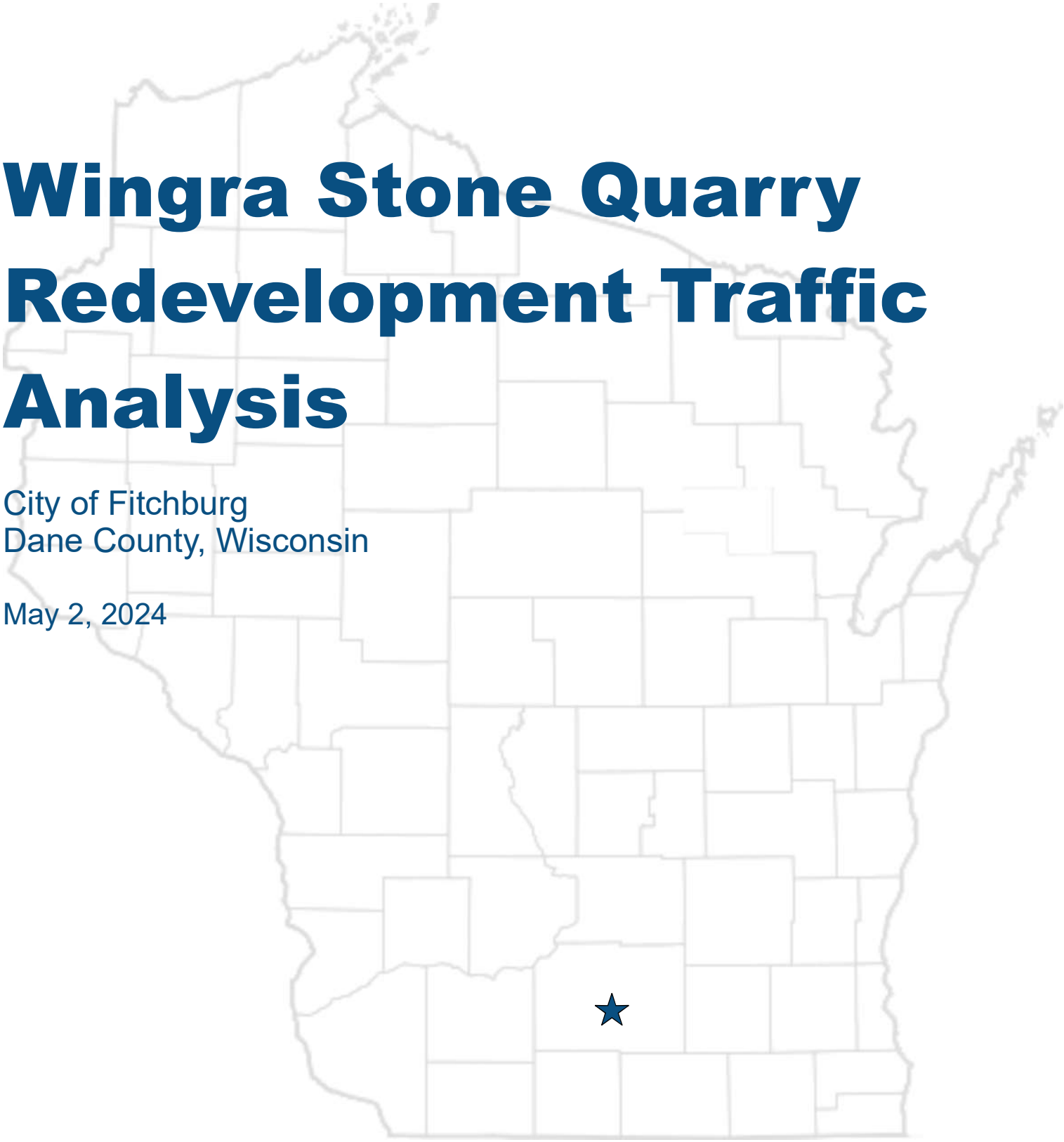
TRAFFIC ANALYSIS & DESIGN, INC.

P.O. Box 128
Cedarburg, WI 53012
800.605.3091
www.tadi-us.com

Wingra Stone Quarry Redevelopment Traffic Analysis

City of Fitchburg
Dane County, Wisconsin

May 2, 2024



TRAFFIC IMPACT ANALYSIS FOR:

WINGRA STONE QUARRY REDEVELOPMENT

CITY OF FITCHBURG, DANE COUNTY, WISCONSIN

DATE SUBMITTED: May 2, 2024

PREPARED FOR:
Fitchburg Partners, LLC
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Contact Person: Daniel Bieberitz, P.E., PTOE

"I certify that this Traffic Impact Analysis has been prepared by me or under my immediate supervision and that I have experience and training in the field of traffic and transportation engineering."

Daniel C. Bieberitz

Daniel Bieberitz, P.E., PTOE
TADI

Traffic Impact Analysis
Table of Contents

LIST OF EXHIBITS ii
LIST OF APPENDICES iii
PART A – INTRODUCTION 1
PART B – STUDY AREA 1
PART C – TRAFFIC VOLUMES 1
C1. Year 2024 Existing Traffic Volumes 1
C2. Proposed Development 2
C3. Trip Generation 2
C4. Determination of Linked and Pass-By Trip Traffic 3
C5. Trip Distribution and Assignment 3
PART D – ANTON DRIVE REDEVELOPMENT PLAN 3
PART E – INTERSECTION CAPACITY ANALYSIS 4
E1. Level of Service Definitions 4
E2. Traffic Operations – Existing Conditions 5
E3. Traffic Operations – Year 2025 Full Build 5
PART F – RECOMMENDED MODIFICATIONS 8
PART G – CONCLUSION 9

LIST OF EXHIBITS

Exhibit 1.....Study Area Map
Exhibit 2.....Conceptual Site Plan A
Exhibit 3.....Conceptual Site Plan B
Exhibit 4.....Existing Transportation Detail
Exhibit 5.....Year 2024 Existing Traffic Volumes
Exhibit 6.....On-Site Trip Generation and Distribution Tables
Exhibit 7.....Trip Distribution Percentages
Exhibit 8.....On-Site Development New Trips
Exhibit 9.....On-Site Development Pass-by Trips
Exhibit 10.....On-Site Development Driveway Trips
Exhibit 11.....Year 2025 Build Traffic Volumes
Exhibit 12.....Year 2025 Build Traffic Volumes – Alternative Geometry
Exhibit 13.....Recommended Modifications

LIST OF APPENDICES

Appendix A .....Traffic

Existing Turning Movement Counts
Saturation Flow Rate Calculations
McKee Road & Fitchrona Road Signal Timings

Appendix B ..... Year 2024 Existing Traffic Peak Hour Analysis Outputs

Appendix C ..... Year 2025 Build Traffic Peak Hour Analysis Outputs

Year 2025 Build Traffic – Planned Geometry

Appendix D Year 2025 Build Traffic Peak Hour Analysis Outputs

Year 2025 Build Traffic – Improved Geometry
Year 2025 Build Traffic – Alternative Improved Geometry

PART A – INTRODUCTION

A mixed-use development (residential and retail) is being proposed on the northwest corner of McKee Road and Fitchrona Road in the City of Fitchburg. The new development may be constructed in phases, depending on market demand; however, most of the development will likely be built by late 2025 with some development occurring a year or two after 2025.

This traffic study summarizes the trip generation and traffic operations anticipated with the proposed full development and assumes completion year of 2025 for this study.

PART B – STUDY AREA

An aerial of the study area with the site location and future potential development areas is shown in Exhibit 1. There are two conceptual site plans for the proposed development, Site Plan A, which assumes a 120,000 sq. ft. retail plaza, and Site Plan B, which assumes a 160,000 sq. ft. big box user. Both site plans include four outlots and multi-family units. Exhibit 2 and 3 show the development Site Plan A and Site Plan B, respectively.

The study area includes the following intersections:

- McKee Road with Fitchrona Road
- McKee Road with the proposed site access driveway (right-in, right-out)
- Fitchrona Road with the south main driveway development access
- Fitchrona Road with the middle/retail driveway access
- Fitchrona Road with the north driveway/multi-family access
- Fitchrona Road with Kapec Road

Exhibit 4 shows the existing transportation details of the study area intersections.

McKee Road/County Trunk Highway PD (CTH PD) is a four-lane divided east/west principal arterial highway with a speed limit of 40 mph within the study area. The McKee Road and USH 18 interchange is just under a half-mile east of the proposed site. McKee Road has an average annual daily traffic (AADT) volume of approximately 27,200 vehicles per day (vpd) just east of Fitchrona Road. There are sidewalks along both sides of McKee Road east of Fitchrona Road and a sidewalk only along the south side west of Fitchrona Road. Street lighting is present in the McKee Road center median within the study area. There are also marked bike lanes on McKee Road within the study area.

Fitchrona Road is a two-lane undivided collector street that crosses McKee Road on the south side and connects to Kapec Road and Anton Drive on the north side. The speed limit along Fitchrona Road is 25-mph speed limit. Fitchrona Road widens out to a 5-lane divided section at McKee Road with four southbound lanes (one right-turn lane, two through lanes, and a left-turn lane) and one northbound lane. The AADT is unknown along Fitchrona Road; however, based on the 6-hour weekday traffic count, the AADT is estimated to be around 3,000 vpd. There are sidewalks and street lighting along both sides of Fitchrona Road. Although not officially marked, there is a 5-foot paved shoulder along Fitchrona Road for bikes.

PART C – TRAFFIC VOLUMES

C1. Year 2024 Existing Traffic Volumes

TADI performed a weekday morning (6:00 – 9:00 am) and afternoon (3:00 – 6:00 pm) turning movement traffic counts at the following intersections on Monday and Tuesday, April 15 -16, 2024 and on Saturday, April 13, 2024:

- McKee Road with Fitchrona Road

- Fitchrona Road with Kapec Road

The peak hours from the turning movement counts were identified to be the following time periods:

- Weekday AM Peak hour: 7:15 – 8:15 am
- Weekday PM Peak Hour: 4:45 – 5:45 pm
- Saturday Midday Peak Hour: 11:15 AM – 12:15 PM

Exhibit 5 shows the Year 2024 existing peak hour traffic volumes. The turning movement counts are included in Appendix A.

C2. Proposed Development

To address any potential future traffic impacts at the study area intersections, it is necessary to identify the hourly volume of traffic generated by the anticipated development. There are two possibilities for this development, with Site Plan A (Exhibit 2) showing a 120,00 sq. ft. retail plaza and up to 58 townhomes or Site Plan B (Exhibit 3) showing a 160,000 sq. ft. big box user and no townhomes. The full buildout of the development will include:

- 300 multi-family units (Lot 1)
- 58 multi-family units (townhomes on Lot 1) – Site Plan A only
- 120,000 sq. ft. retail plaza – Site Plan A only
- 160,000 sq. ft. retail (one user) – Site Plan B only
- 2,800 sq. ft. convenience/gas station with up to 10 pumps – Site Plan B only
- 4,000 sq. ft. fast-food restaurant (Outlot 1)
- 6,000 sq. ft. automatic care wash with one tunnel (Outlot 2)
- 6,300 sq. ft. fast-food restaurant (Outlot 3)
- 4,000 sq. ft. bank with one drive-through lane (Outlot 4)

C3. Trip Generation

Trips for the proposed mixed-use development were calculated based on the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 11th Edition* and *WisDOT's Specific Trip Generation Rates for Convenience Store/Gas Station* land use. A worst-case scenario was completed between the Site Plan A and Site Plan B land uses for the trip generation rates. Based on the ITE Trip Generation rates, Site Plan B would be the worst-case scenario. Table 1 below shows the comparison of the total generated trips.

Table 1: Trip Generation Comparison

Site Plan	Weekday Daily	AM Peak			PM Peak			SAT Peak		
		In	Out	Total	In	Out	Total	In	Out	Total
Site Plan A	19,590	525	550	1,075	795	740	1,535	1,005	945	1,950
Site Plan B	19,660	600	605	1,205	815	770	1,585	1,020	980	2,000

Note: Trips shown are before linked trips and pass-by trips are applied.

Based on Table 1 results, Site Plan B shows the most generated trips and therefore will be used for the intersection analysis. The trip generation table for the potential land uses for Site Plan B is shown on Exhibit 6. The full build out, after accounting for 10% linked trips (trips internal to the development) and pass-by trips for the convenience store/gas station, the big box user (free-standing discount superstore), fast-food restaurants, and the car wash, is expected to generate approximately 13,870 new trips (6,935 in/6,935 out) during a typical weekday with 815 trips (405 in/410 out) during the weekday AM peak hour, 1,065 trips (555 in/510 out) in the weekday PM peak hour, and 1,565 trips (800 in/765 out) in the Saturday midday peak hour.

C4. Determination of Linked and Pass-By Trip Traffic

Linked trips occur when a motorist visits one or more tenants or land uses within a development site (e.g., a motorist from the fast-food restaurant visits the convenience store/gas station prior to leaving the overall site). Pass-by trips occur when motorists already on the roadway system stops at a development prior to continuing to their intended route (e.g., a motorist heading west on McKee Road makes a stop at the fast-food restaurant and then continues west on McKee Road). Based on the Institute of Transportation Engineers (ITE) Trip Generation Handbook, 20-35 percent of the convenience store/gas station, free-standing discount superstore, fast-food restaurants, and automatic car wash land uses were assumed to be pass-by trips. The pass-by trips will be from traffic already traveling past the site on McKee Road. The pass-by trips were kept within 10-percent of the traffic currently on McKee Road fronting the site, per WisDOT recommended practice.

C5. Trip Distribution and Assignment

The trip distribution of new site trips was based on roadway traffic count volumes, existing traffic patterns and area land uses surrounding the study intersections. The distribution of the generated trips is listed below and shown graphically on Exhibit 7.

- 40% to/from the west on McKee Road
- 38% from the east on McKee Road
- 42% to the east of McKee Road
- 4% from the south on Kapec Road (portion of the multi-family generated traffic)
- 10% to/from the northeast on Fitchrona Road
- 8% to/from the south on Fitchrona Road

The proposed development trips were assigned to the study intersections based on the above trip distribution percentages. The on-site development new trips traffic assignment is shown on Exhibit 8, and the on-site development pass-by trip traffic assignment is shown on Exhibit 9 with the total driveway trips (new trips plus pass-by trips) shown on Exhibit 10.

The Year 2025 Build traffic volumes are shown on Exhibit 11, which was determined by summing the Year 2024 Existing Traffic Volumes (Exhibit 5) and the proposed development driveway trips (Exhibit 10).

PART D – ANTON DRIVE REDEVELOPMENT PLAN

The Anton Drive Redevelopment Plan was completed in January 2017, which included planned land uses for the Wingra Stone Quarry redevelopment area. Under the Transportation analysis section of this report, weekday PM peak hour trips were assumed for Regions 7 and 8, which includes this Wingra Stone Quarry redevelopment area as presented in this TIA. Regions 7 and 8 assumed 360 entering trips and 375 exiting trips during the weekday PM peak hour. By comparison, this proposed development is expected to generate 555 entering trips and 510 exiting trips, assuming the worst-case scenario. This is approximately 45% higher trips, when combining both entering and exiting traffic, than shown in the Anton Drive Redevelopment Plan.

As part of the Anton Drive Redevelopment Plan, a traffic count was completed in year 2012 and projected to year 2030 with the added planned development trips. Two development concepts were completed, with Concept A assuming the majority of the new development to include multi-unit residential buildings, with some regions proposed to include mixed-use/office buildings and one mid-box commercial building. Concept B assumed the majority of new development to include mid-box commercial buildings and mixed-use/office buildings, with some regions developed for multi-unit residential buildings.

A comparison was completed using this TIA year 2025 build volumes compared to the projected year 2030 volumes (Concept B) from the Anton Drive Redevelopment Plan, which is shown below in Table 2.

Table 2: Year 2025 & 2030 Projected Volume Comparison

Projected Volumes		From North Fitchrona Road Total	From East McKee Road Total	From South Fitchroma Road Total	From West McKee Road Total	Total Int. Volume
AM Peak Hour	Year 2025 Build Volumes	450	970	305	1240	2274
	Year 2030 Projected Volumes [1]	545	830	460	1755	3590
		Percent Growth from 2025 to match Year 2030 Projected Volumes=				**58%**
PM Peak Hour	Year 2025 Build Volumes	665	1275	692	1345	3079
	Year 2030 Projected Volumes [1]	940	1745	885	1255	4825
		Percent Growth from 2025 to match Year 2030 Projected Volumes=				**57%**

1) From 2017 Anton Drive Redevelopment Plan, assuming Concept B development.

From Table 2, it shows that traffic can still increase by 57% and still be within the year 2030 planned traffic volumes from the Anton Drive Redevelopment Plan.

PART E – INTERSECTION CAPACITY ANALYSIS

E1. Level of Service Definitions

The study area intersections were analyzed based on the procedures set forth in the *Highway Capacity Manual, 6th Edition* (HCM). Intersection operation is defined by "Level of Service." Level of Service (LOS) is a quantitative measure that refers to the overall quality of flow at an intersection ranging from very good, represented by LOS 'A', to very poor, represented by LOS 'F'. For the purpose of this study, and as is standard for use in urban and suburban areas in Wisconsin, LOS D or better was used to define desirable peak hour operating conditions at the study area intersections. Descriptions of the various levels of service are shown in Table 3.

Table 3: Level of Service Descriptions

LOS	Signalized Intersections Control Delay/Vehicle (sec/veh)	Unsignalized Intersections Avg. Control Delay (sec/veh)	Relative Delay
A	≤10	≤10	Short Delays
	Free-flow traffic operations at avearge travel speeds. Vehicles completely unimpeded in ability to maneuver. Minimal delay at signalized intersections.		
B	> 10 - 20	> 10 - 15	
	Reasonably unimpeded traffic operations at average travel speeds. Vehicle maneuverability slightly restricted. Low traffic delays.		
C	> 20 - 35	> 15 - 25	
	Stable traffic operations. Lane changes becoming more restricted. Travel speeds reduced to half of average free flow travel speeds. Longer intersection delays.		
D	> 35 - 55	> 25 - 35	Moderate Delays
	Small increases in traffic flow can cause increased delays. Delays likely attributable to increased traffic, reduced signal progression, and adverse timing.		
E	> 55 - 80	> 35 - 50	
	Significant delays. Travel speeds reduced to one-third of average free flow travel speed.		
F	> 80	> 50	Long Delays
	Extremely low speeds. Intersection congestion. Long delays. Extensive traffic queues at intersections.		

Source: Highway Capacity Manual, Transportation Research Board, Washington, D.C., 2010

E2. Traffic Operations – Existing Conditions

The analysis of the Year 2024 existing traffic volumes was conducted using the existing transportation detail shown in Exhibit 4 and the traffic volumes in Exhibit 5. Based on the results of the capacity analysis as shown on Table 4, all movements currently operate at a LOS D or better. The year 2024 analysis worksheets are included in Appendix B.

Table 4
Year 2024 Existing Traffic Peak Hour Operating Conditions
With Existing Geometrics and Traffic Control

Intersection	Peak Hour	Metric	Level of Service (LOS) per Movement by Approach												I/S LOS & Delay
			Eastbound			Westbound			Northbound			Southbound			
			↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙	
Node 100: Fitchrona Road & Kapec Road *Two-Way Stop Control*		*Lanes->*	*1*		*1*	*1*		*1*		*1*			*1*		
	AM	LOS	A		*	A		*		B			B		A
		Delay	7.6		*	7.4		*		10.6			10.9		4.6
		Queue	25'		*	0		*		25'			25'		
	PM	LOS	A		*	A		*		B			B		A
		Delay	7.8		*	7.6		*		10.5			12.3		3.8
		Queue	25'		*	25'		*		25'			25'		
	Sat. Midday	LOS	A		*	A		*		A			B		A
		Delay	0		*	7.5		*		9.5			11.9		2.4
		Queue	0		*	25'		*		25'			25'		
Node 500: McKee Road & Fitchrona Road *Traffic Signal Control*		*Lanes->*	*1*	*2*	*1*	*2*	*2*	*1*	*2*	*1*	*1*	*1*	*2*	*1*	
	AM	LOS	D	C	B	D	B	B	D	C	C	D	C	C	C
		Delay	42.3	21.1	14.6	35.5	16.3	12.1	36.4	27.4	23.1	42.2	29.7	27.8	21.6
		Queue	40'	365'	60'	45'	260'	25'	80'	85'	50'	40'	40'	40'	
	PM	LOS	D	C	C	D	B	B	D	C	C	D	D	C	C
		Delay	46.7	26.9	20.6	40.1	18.9	14.2	42.8	29.8	22.8	46.7	36.6	32.5	28.5
		Queue	65'	400'	115'	155'	295'	25'	210'	120'	135'	65'	95'	55'	
	Sat. Midday	LOS	C	C	C	C	B	B	C	B	B	D	C	C	C
		Delay	33.9	22.8	20.2	28.4	17.2	14.8	28.7	18.8	14	35	23.2	20.6	22.5
		Queue	45'	190'	85'	115'	140'	25'	120'	80'	95'	35'	50'	25'	

(-) indicates a movement that is prohibited or does not exist; (*) indicates a freeflow movement.
Delay is reported in seconds. Queue is the maximum of the 50th & 95th percentile queue, measured in feet.

E3. Traffic Operations – Year 2025 Full Build

The analysis for Year 2025 build traffic volumes (Exhibit 11) was conducted using the existing transportation detail shown in Exhibit 4 and the proposed full access site driveways along Fitchrona Road and the right-in, right-out driveway on McKee Road, as shown in Exhibit 3. At the McKee Road and Fitchrona Road intersection, the traffic signal maximum cycle length was kept the same as the existing conditions analysis; however, the maximum green times were optimized. The results of the capacity analysis (LOS, delay, and queue length) for each movement at the study intersection are shown in Table 5. With the exception of the McKee Road at Fitchrona Road intersection, all of the movements at the study intersections are expected to continue to operate at LOS D or better. Due to the higher projected left-turn volumes, the left-turn movements and some through movements at the McKee Road at Fitchrona Road intersection are expected to operate at a LOS E or F without any geometric improvements. The analysis worksheets are included in Appendix C.

Table 5
Year 2025 Build Traffic Peak Hour Operating Conditions
With Planned Geometrics and Traffic Control

Intersection	Peak Hour	Metric	Level of Service (LOS) per Movement by Approach												I/S LOS & Delay
			Eastbound			Westbound			Northbound			Southbound			
			↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙	
Node 100: Fitchrona Road & Kapec Road *Two-Way Stop Control*		*Lanes->*	*1*		*1*	*1*		*1*		*1*			*1*		
	AM	LOS	A		*	A		*		B			B		A
		Delay	7.7		*	7.5		*		12.3			11.9		4.3
		Queue	25'		*	0		*		25'			25'		
	PM	LOS	A		*	A		*		B			B		A
		Delay	7.9		*	7.7		*		13.4			13.6		4.0
		Queue	25'		*	25'		*		25'			25'		
	Sat. Midday	LOS	A		*	A		*		B			B		A
		Delay	0		*	7.8		*		12.3			14.3		2.5
		Queue	0		*	25'		*		25'			25'		
Node 200: Fitchrona Road & Site Drive #1 (Multi-family) *One-Way Stop Control*		*Lanes->*	*1*		-	-		*1*		-			*1*		
	AM	LOS	A		-	-		*		-			B		A
		Delay	7.7		-	-		*		-			10.4		2.6
		Queue	0		-	-		*		-			25'		
	PM	LOS	A		-	-		*		-			B		A
		Delay	8.3		-	-		*		-			11.4		1.9
		Queue	25'		-	-		*		-			25'		
	Sat. Midday	LOS	A		-	-		*		-			B		A
		Delay	7.9		-	-		*		-			10.3		1.5
		Queue	25'		-	-		*		-			25'		
Node 300: Fitchrona Road & Site Drive #3 (Retail) *One-Way Stop Control*		*Lanes->*	*1*			-			*1*	*1*		-	*1*		
	AM	LOS	B			-			A	*		-	*		A
		Delay	12.5			-			8.2	*		-	*		4.9
		Queue	30'			-			25'	*		-	*		
	PM	LOS	C			-			A	*		-	*		A
		Delay	20.8			-			8.8	*		-	*		6.8
		Queue	80'			-			25'	*		-	*		
	Sat. Midday	LOS	D			-			A	*		-	*		B
		Delay	27.6			-			8.6	*		-	*		11.1
		Queue	130'			-			25'	*		-	*		
Node 400: Fitchrona Road & Site Drive #4 (Retail) *One-Way Stop Control*		*Lanes->*	*1*			-			*1*	*1*		-	*1*		
	AM	LOS	B			-			A	*		-	*		A
		Delay	13			-			9	*		-	*		3.9
		Queue	25'			-			25'	*		-	*		
	PM	LOS	C			-			A	*		-	*		A
		Delay	17.8			-			9.8	*		-	*		4.1
		Queue	50'			-			25'	*		-	*		
	Sat. Midday	LOS	C			-			A	*		-	*		A
		Delay	18.4			-			9.9	*		-	*		5.4
		Queue	70'			-			35'	*		-	*		
Node 500: McKee Road & Fitchrona Road *Traffic Signal Control*		*Lanes->*	*1*	*2*	*1*	*2*	*2*	*1*	*2*	*1*	*1*	*1*	*2*	*1*	
	AM	LOS	E	C	B	D	D	C	D	D	D	E	C	C	D
		Delay	60.5	25.3	18.2	52.5	39	27.8	54.1	52.3	42.2	56.2	34.7	20.8	38.4
		Queue	420'	480'	80'	60'	500'	105'	105'	165'	70'	395'	65'	65'	
	PM	LOS	F	C	C	E	E	D	E	F	D	F	D	C	E
		Delay	90.4	34.8	28.3	70.4	57.9	39.2	71	85.5	50.7	82.8	47.9	25.1	58.4
		Queue	585'	435'	145'	195'	515'	135'	225'	265'	185'	550'	130'	90'	
	Sat. Midday	LOS	E	C	C	E	D	D	E	E	D	E	D	B	D
		Delay	74.5	30.3	28	60.4	52.6	45.6	63.2	67.2	45.6	70.1	36.9	15.4	54
		Queue	675'	235'	115'	180'	325'	170'	190'	235'	175'	625'	100'	60'	
Node 600: McKee Road & Site Drive #5 (Right-in, Right-out) *One-Way Stop Control*		*Lanes->*	-	*2*	-	-	*2*	*1*		-		-	-	*1*	
	AM	LOS	-	*	-	-	*	*		-		-	-	C	A
		Delay	-	*	-	-	*	*		-		-	-	16.8	1.2
		Queue	-	*	-	-	*	*		-		-	-	50'	
	PM	LOS	-	*	-	-	*	*		-		-	-	C	A
		Delay	-	*	-	-	*	*		-		-	-	24.6	2
		Queue	-	*	-	-	*	*		-		-	-	90'	
	Sat. Midday	LOS	-	*	-	-	*	*		-		-	-	C	A
		Delay	-	*	-	-	*	*		-		-	-	17.5	2.3
		Queue	-	*	-	-	*	*		-		-	-	80'	

Due to the higher eastbound left-turn volume and southbound left-turn volume, dual left-turn lanes were added at the McKee Road at Fitchrona Road intersection for these approaches. Also, due to the longer queues at the two site driveways on Fitchrona Road, separate left-turn and right-turn exit lanes were added at the two retail driveways (Site Drive #3 and #4 as shown on Exhibit 3). These additional turn lanes will result in reducing the queues and delays for the eastbound right-turn exit traffic. Table 6 shows the capacity analysis results of the improved geometry intersections. Based on the results of the capacity analysis, all movements are expected to operate at a LOS D or better, except the eastbound left-turn movement at Site Drive #4; however, this left-turn movement is expected to be low (about 5 vehicles per hour) as most drivers would likely go to the northern drive (Drive #3) to make a left-turn to exit since there is expected to be less entering traffic at this intersection.

Table 6
Year 2025 Build Traffic Peak Hour Operating Conditions
With Improved Geometrics and Traffic Control

Intersection	Peak Hour	Metric	Level of Service (LOS) per Movement by Approach												I/S LOS & Delay
			Eastbound			Westbound			Northbound			Southbound			
			↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙	
Node 300: Fitchrona Road & Site Drive #3 (Retail) *One-Way Stop Control*		*Lanes->*	*1*	-	*1*		-		*1*	*1*		-	*1*		
	AM	LOS	C	-	B		-		A	*		-	*		A
		Delay	15.9	-	10.7		-		8.2	*		-	*		4.7
		Queue	25'	-	25'		-		25'	*		-	*		
	PM	LOS	D	-	B		-		A	*		-	*		A
		Delay	28.7	-	12.7		-		8.8	*		-	*		5.6
		Queue	25'	-	35'		-		25'	*		-	*		
	Sat. Midday	LOS	D	-	B		-		A	*		-	*		A
		Delay	33.3	-	11.6		-		8.6	*		-	*		7.7
		Queue	40'	-	35'		-		25'	*		-	*		
Node 400: Fitchrona Road & Site Drive #4 (Retail) *One-Way Stop Control*		*Lanes->*	*1*	-	*1*		-		*1*	*1*		-	*1*		
	AM	LOS	C	-	B		-		A	*		-	*		A
		Delay	15.9	-	10.7		-		9	*		-	*		3.9
		Queue	25'	-	25'		-		25'	*		-	*		
	PM	LOS	E	-	C		-		A	*		-	*		A
		Delay	44.3	-	15.4		-		9.8	*		-	*		3.9
		Queue	25'	-	40'		-		25'	*		-	*		
	Sat. Midday	LOS	F	-	C		-		A	*		-	*		A
		Delay	55.9	-	15.4		-		9.9	*		-	*		5.1
		Queue	25'	-	55'		-		35'	*		-	*		
Node 500: McKee Road & Fitchrona Road *Traffic Signal Control*		*Lanes->*	*2*	*2*	*1*	*2*	*2*	*1*	*2*	*1*	*1*	*2*	*2*	*1*	
	AM	LOS	D	C	B	D	C	B	D	D	B	D	C	A	C
		Delay	38.8	22.2	16.2	39.3	25.7	19.5	40.9	36.4	11.6	38.6	29.7	8.8	27.5
		Queue	170'	420'	70'	60'	420'	85'	100'	155'	50'	175'	65'	55'	
	PM	LOS	D	C	C	D	C	C	D	D	B	D	D	A	C
		Delay	41	26	21.1	42.2	28.6	22.3	41.3	43.8	12.1	41	38.2	9.9	32.1
		Queue	235'	420'	140'	190'	455'	120'	225'	205'	115'	230'	130'	70'	
	Sat. Midday	LOS	C	C	C	D	C	C	D	C	A	C	C	A	C
		Delay	33	22.9	21.1	35.4	28.5	25.6	35.4	34.4	8.9	33.1	27.3	5.3	28.6
		Queue	240'	220'	110'	165'	295'	155'	175'	195'	90'	235'	95'	40'	

An alternative improved geometry analysis was completed which would allow eastbound left-turn traffic at the western site driveway on McKee Road (Site Drive #5 as shown in Exhibit 3). This would make the intersection a left-in, right-in, right-out access (no southbound left-turn traffic out). See Exhibit 12 for the rerouted volumes with this alternative geometry. The advantage of this improvement is that the dual eastbound left-turn lanes on McKee Road at Fitchrona Road would not be needed. Only the extension of the eastbound left-turn lane at Fitchrona Road would be needed as well as the dual southbound left-turn lanes on Fitchrona Road at McKee Road, as previously analyzed. The change in access at Site Drive #5 would also reduce traffic along Fitchrona Road at Site Drives #3 and #4, which would reduce delays at these intersections.

Table 7 shows the capacity analysis results of the alternative improved geometry. Based on the results of the capacity analysis, all movements are expected to operate at a LOS D or better with less overall intersection delay at the McKee Road and Fitchrona Road without having the eastbound dual left-turn lanes.

The build analysis worksheets for the improved geometries are included in Appendix D.

Table 7
Year 2025 Build Traffic Peak Hour Operating Conditions
With Alternative Improved Geometrics and Traffic Control

Intersection	Peak Hour	Metric	Level of Service (LOS) per Movement by Approach												I/S LOS & Delay
			Eastbound			Westbound			Northbound			Southbound			
			↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙	
Node 300: Fitchrona Road & Site Drive #3 (Retail) *One-Way Stop Control*		*Lanes->*	*1*	-	*1*		-		*1*	*1*		-	*1*		
	AM	LOS	B	-	B		-		A	*		-	*		A
		Delay	13.4	-	10.7		-		8	*		-	*		4.1
		Queue	25'	-	25'		-		25'	*		-	*		
	PM	LOS	C	-	B		-		A	*		-	*		A
		Delay	19.8	-	12.7		-		8.4	*		-	*		4.8
		Queue	35'	-	25'		-		25'	*		-	*		
	Sat. Midday	LOS	C	-	B		-		A	*		-	*		A
		Delay	20.2	-	11.6		-		8.2	*		-	*		6.4
		Queue	25'	-	35'		-		25'	*		-	*		
Node 400: Fitchrona Road & Site Drive #4 (Retail) *One-Way Stop Control*		*Lanes->*	*1*	-	*1*		-		*1*	*1*		-	*1*		
	AM	LOS	C	-	B		-		A	*		-	*		A
		Delay	18.4	-	11.8		-		8.6	*		-	*		3.3
		Queue	25'	-	25'		-		25'	*		-	*		
	PM	LOS	D	-	C		-		A	*		-	*		A
		Delay	25.6	-	15.4		-		9.2	*		-	*		3.5
		Queue	25'	-	40'		-		25'	*		-	*		
	Sat. Midday	LOS	D	-	C		-		A	*		-	*		A
		Delay	27.7	-	15.4		-		9.1	*		-	*		4.7
		Queue	25'	-	55'		-		25'	*		-	*		
Node 500: McKee Road & Fitchrona Road *Traffic Signal Control*		*Lanes->*	*1*	*2*	*1*	*2*	*2*	*1*	*2*	*1*	*1*	*2*	*2*	*1*	
	AM	LOS	D	C	B	D	C	A	D	D	B	D	C	C	C
		Delay	46.5	22.9	16.6	38	23	5.6	39.4	35	10.8	37.3	28.6	24.2	26.2
		Queue	145'	415'	70'	60'	415'	85'	105'	155'	50'	170'	65'	75'	
	PM	LOS	D	C	C	D	C	A	D	D	B	D	D	C	C
		Delay	44.8	26.8	21.7	40	27	6.9	39.1	40.6	10.8	38.7	35.7	26.9	30.6
		Queue	225'	430'	140'	195'	470'	125'	225'	205'	115'	230'	130'	100'	
	Sat. Midday	LOS	D	C	C	C	C	A	C	C	A	C	C	B	C
		Delay	36.7	23.8	21.8	32.8	26.1	7.9	32.6	31	7.5	30.6	24.8	17.6	26.4
		Queue	215'	225'	110'	160'	290'	150'	170'	190'	85'	230'	95'	60'	
Node 600: McKee Road & Site Drive #5 (Right-in, Right-out) *One-Way Stop Control*		*Lanes->*	*1*	*2*	-	-	*2*	*1*		-		-	-	*1*	
	AM	LOS	B	*	-	-	*	*		-		-	-	C	A
		Delay	13.4	*	-	-	*	*		-		-	-	16.8	1.2
		Queue	30'	*	-	-	*	*		-		-	-	50'	
	PM	LOS	C	*	-	-	*	*		-		-	-	C	A
		Delay	18.5	*	-	-	*	*		-		-	-	24.6	3.3
		Queue	60'	*	-	-	*	*		-		-	-	90'	
	Sat. Midday	LOS	B	*	-	-	*	*		-		-	-	C	A
		Delay	13.5	*	-	-	*	*		-		-	-	17.5	3.8
		Queue	50'	*	-	-	*	*		-		-	-	80'	

PART F – RECOMMENDED MODIFICATIONS

Modifications are for jurisdictional consideration and are not legally binding. The City of Fitchburg reserves the right to determine alternative solutions.

Based on the capacity and queuing analysis with the proposed development (worst-case scenario for higher traffic), the following improvements are recommended (also shown on Exhibit 13):

Fitchrona Road and Site Drive #1 (Multifamily driveway):

- Create one shared southbound left-turn/right-turn exit lane with stop control.

Fitchrona Road and Site Drive #2 (for deliveries):

- Create one shared left-turn/right-turn exit lane with stop control.

Fitchrona Road and Site Drive #3 (northern retail drive):

- Create a 50-foot-long eastbound left-turn lane and a separate right-turn lane with stop control.
- For the northbound approach, create a 100-foot-long left-turn lane with 70-foot taper.

Fitchrona Road and Site Drive #4 (southern retail drive):

- Create a 50-foot-long eastbound left-turn lane and a separate right-turn lane with stop control.
- For the northbound approach, create a 125-foot-long left-turn lane with 70-foot taper.

McKee Road and Fitchrona Road:

- Construct an additional southbound left-turn lane, with both left-turn lanes being approximately 280 feet long. Due to the alignment of the northbound and southbound left-turn lanes, the northbound left-turn phase should be leading and the southbound left-turn phase be lagging so the northbound and southbound left-turn phases do not coincide. Increase the southbound left-turn maximum green time to 30 seconds and reduce the NB/SB through phase maximum green time to 30 seconds.
- Lengthen the eastbound left-turn lane from 160 feet to 325 feet. Also, lengthen the eastbound left-turn maximum green time to 25 seconds.

McKee Road and Drive #5 (western retail drive):

- Create a left-in, right-in, right-out driveway with a 200-foot-long eastbound left-turn lane and a 100-foot taper. This widening can occur within the existing raised median on McKee Road. (One streetlight will need to be relocated.)
- For the westbound approach, create a 100-foot-long right-turn lane with a 100-foot taper.

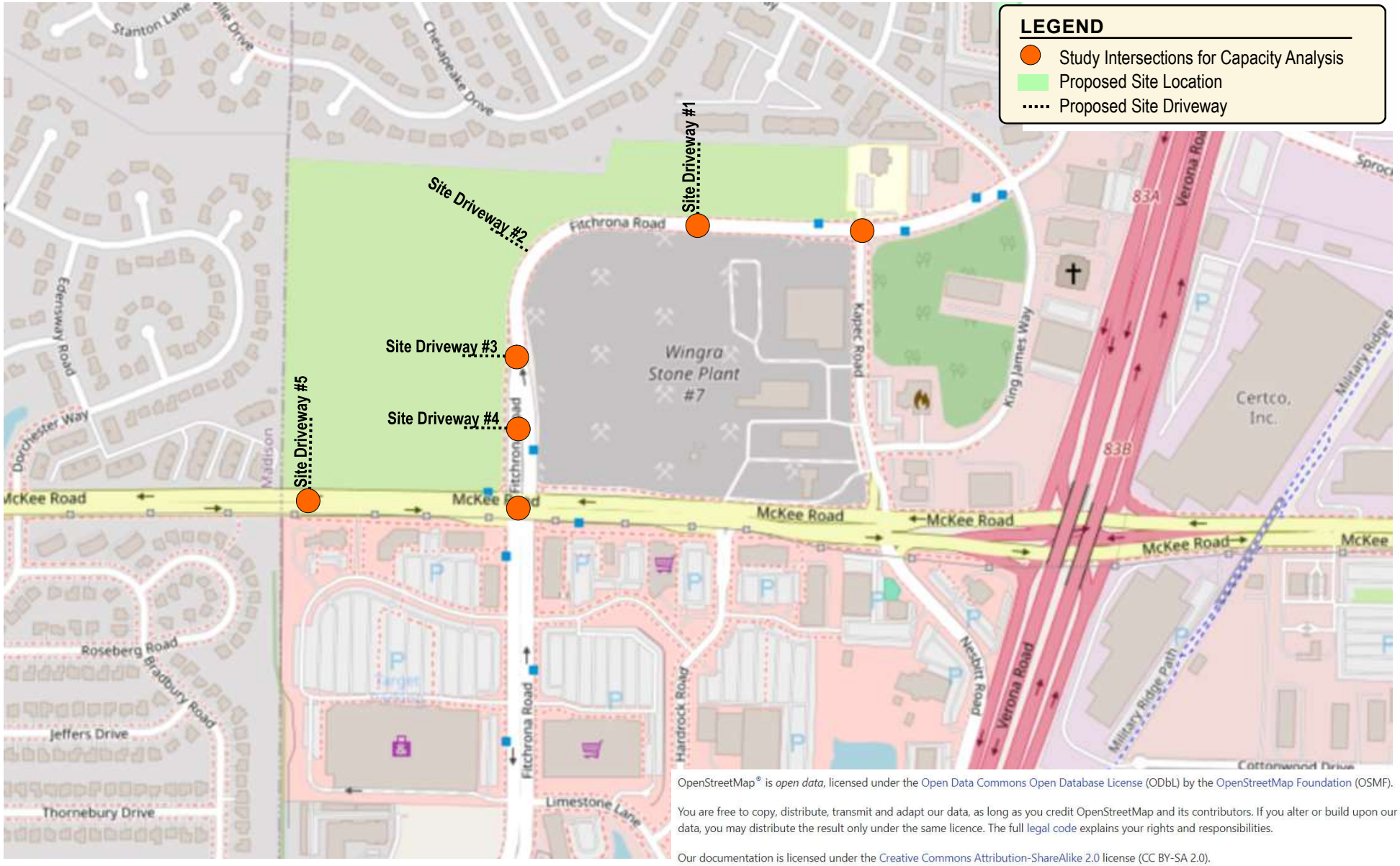
Fitchrona Road and Kapec Road: No additional improvements are needed at this intersection.

The above improvements are within the anticipated improvements from the Anton Drive Redevelopment Plan as mentioned on page 65 of the planning report.

If McKee Road at Drive #5 can only be a right-in, right-out driveway (no left-turn in), then install dual eastbound left-turn lanes of 340-feet long at the Fitchrona intersection. Create an additional northbound receiving lane on Fitchrona road with the inner left lane continuing to be the northbound left-turn lane at Drive #4. See Exhibit 13 for graphical diagram of this option.

PART G – CONCLUSION

With the addition of the Wingra Stone Quarry redevelopment, traffic volumes are expected to increase along McKee Road and Fitchrona Road; however, all movements at the study area intersections are expected to operate safely and efficiently with the recommended improvements.



TRAFFIC ANALYSIS & DESIGN, INC.

3248: 4-25-24

N

NOT TO SCALE

EXHIBIT 1
STUDY AREA MAP

FITCHBURG, WI

TADI
TRAFFIC ANALYSIS & DESIGN, INC.
3248: 4-25-24

N
NOT TO SCALE

EXHIBIT 2
CONCEPTUAL SITE PLAN A

FITCHBURG, WI

JAMESTOWN QUARRY DEVELOPMENT | CONCEPT MASTER PLAN - B

FITCHBURG, WI | 04.18.2024

JSD

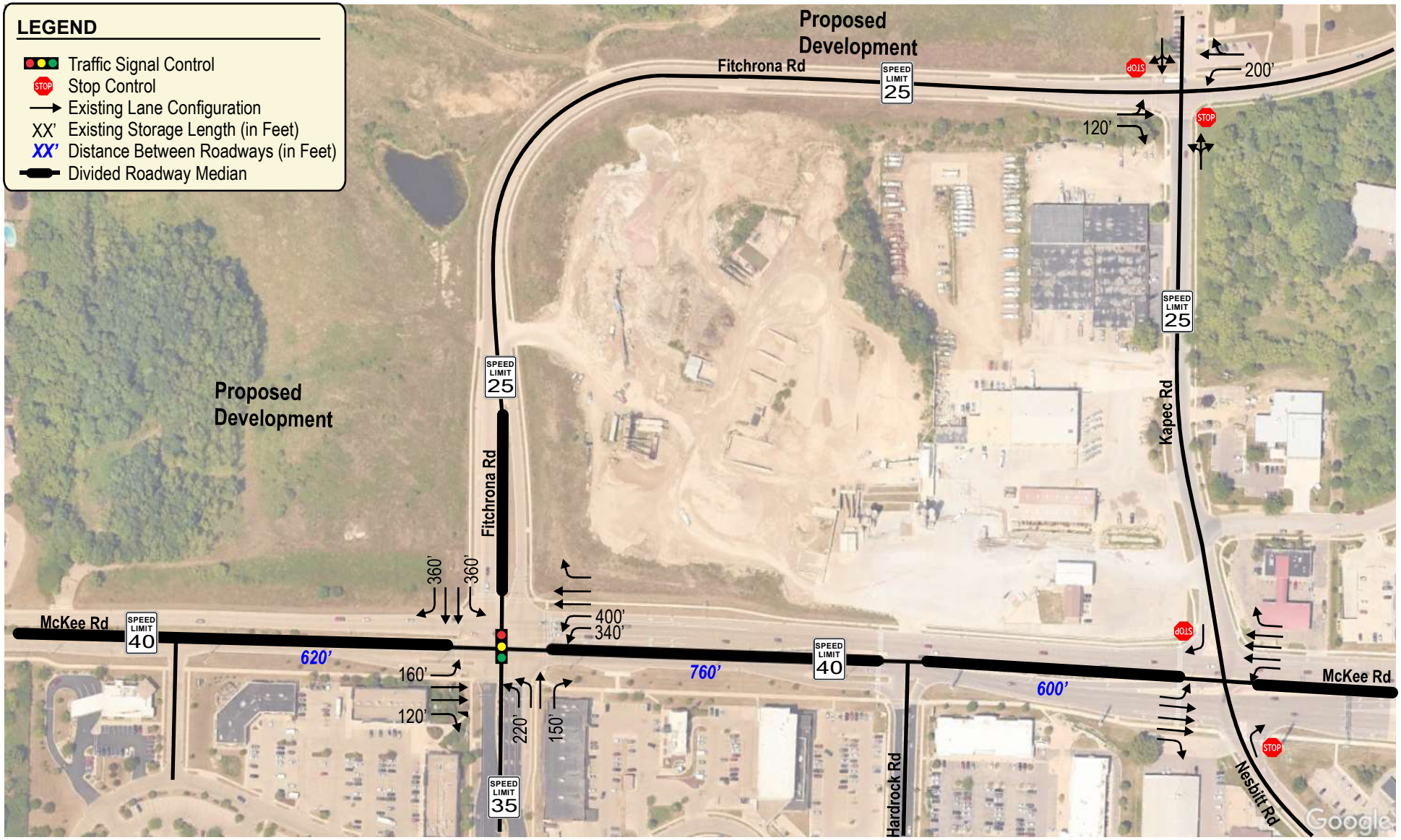
TADI
TRAFFIC ANALYSIS & DESIGN, INC.
3248: 4-25-24

N

NOT TO SCALE

EXHIBIT 3
CONCEPTUAL SITE PLAN B

FITCHBURG, WI



TADI
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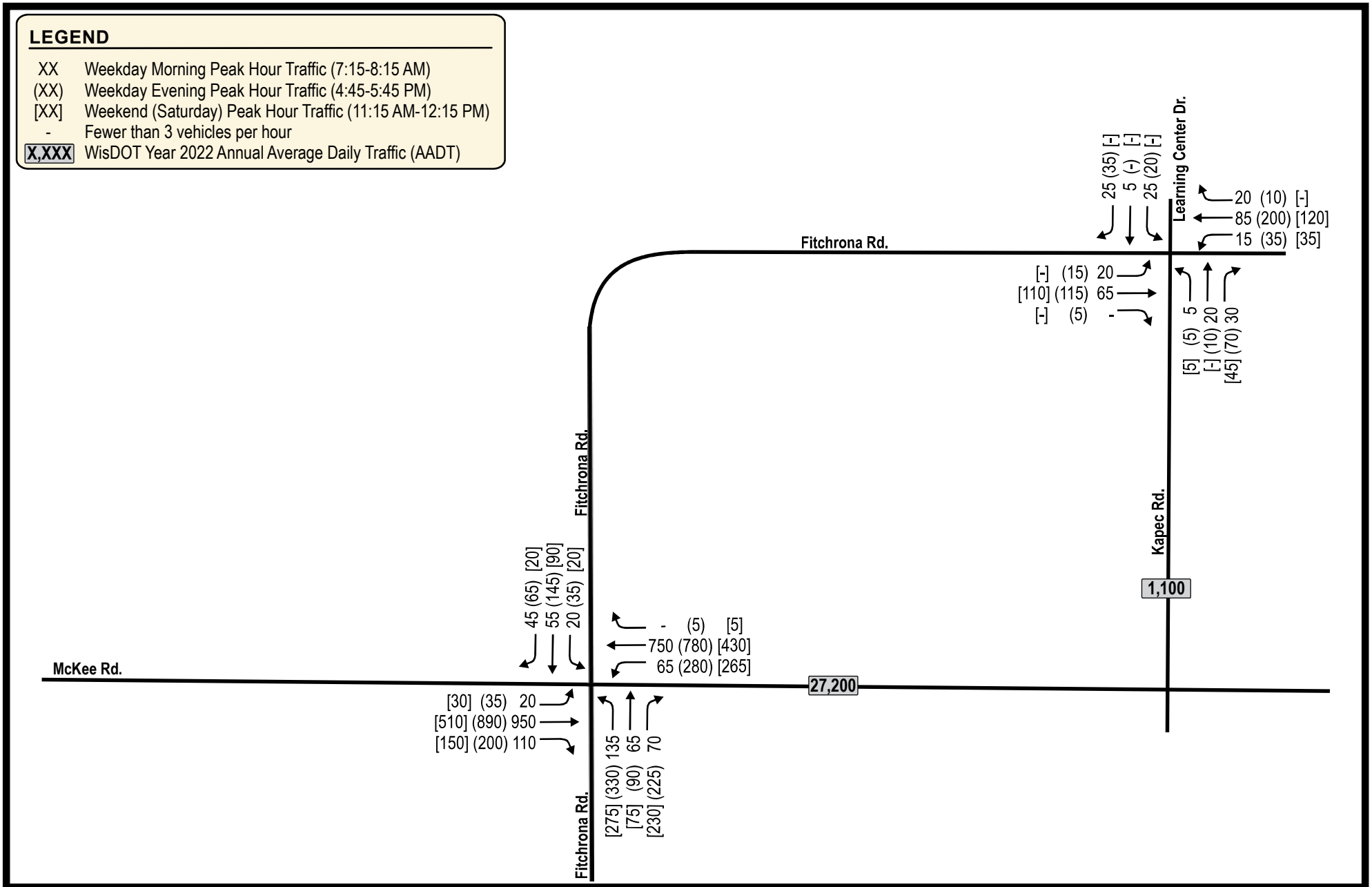
N
NOT TO SCALE

EXHIBIT 4
EXISTING TRANSPORTATION DETAIL

FITCHBURG, WI


LEGEND
XX Weekday Morning Peak Hour Traffic (7:15-8:15 AM)
(XX) Weekday Evening Peak Hour Traffic (4:45-5:45 PM)
[XX] Weekend (Saturday) Peak Hour Traffic (11:15 AM-12:15 PM)
- Fewer than 3 vehicles per hour
X,XXX WisDOT Year 2022 Annual Average Daily Traffic (AADT)
Learning Center Dr.
Fitchrona Rd.
Kapec Rd.
McKee Rd.
1,100
27,200
25 (35) [-]
5 (-) [-]
25 (20) [-]
20 (10) [-]
85 (200) [120]
15 (35) [35]
[-] (15) 20
[110] (115) 65
[-] (5) -
[5] (5) 5
[-] (10) 20
[45] (70) 30
45 (65) [20]
55 (145) [90]
20 (35) [20]
- (5) [5]
750 (780) [430]
65 (280) [265]
[30] (35) 20
[510] (890) 950
[150] (200) 110
[275] (330) 135
[75] (90) 65
[230] (225) 70
TADI
TRAFFIC ANALYSIS & DESIGN, INC.
3248: 4-25-24
N
NOT TO SCALE
EXHIBIT 5
YEAR 2024 EXISTING TRAFFIC VOLUMES
FITCHBURG, WI

On-Site Trip Generation Table - Plan B

Land Use	ITE Code	Proposed Size	Weekday Daily	AM Peak In	AM Peak Out	AM Peak Total	PM Peak In	PM Peak Out	PM Peak Total	SAT Peak In	SAT Peak Out	SAT Peak Total
Multifamily Housing (Low-Rise) (Not Close to Rail Transit)	220	300 Units	2,000 FCE	30 (24%)	85 (76%)	115 FCE	95 (63%)	55 (37%)	150 FCE	70 (54%)	55 (46%)	125 (0.41)
Free-Standing Discount Superstore	813	160.000 x 1,000 SF	8,080 (50.52)	170 (56%)	130 (44%)	300 (1.86)	340 (49%)	355 (51%)	695 (4.33)	415 (50%)	410 (50%)	825 FCE
Convenience Store/Gas Station (3k)	WisDOT	10 Fueling Positions	1,240 FCE	40 (51%)	35 (49%)	75 FCE	45 (50%)	45 (50%)	90 FCE	65 (50%)	60 (50%)	125 FCE
Fast-Food Restaurant with Drive-Through Window - Lot 1	934	4.000 x 1,000 SF	1,870 (467.48)	90 (51%)	90 (49%)	180 (44.61)	70 (52%)	60 (48%)	130 (33.03)	110 (51%)	110 (49%)	220 (55.25)
Automated Car Wash - Lot 2 [1]	948	1 Drive-Thru Lanes	600 (0.00)	20 (50%)	20 (50%)	40 (40.00)	40 (50%)	40 (50%)	80 (77.50)	20 (46%)	20 (54%)	40 (41.00)
Fast-Food Restaurant with Drive-Through Window - Lot 3 [2]	934	6.300 x 1,000 SF	5,720	245 (51%)	240 (49%)	485	215 (52%)	200 (48%)	415	325 (51%)	310 (49%)	635
Drive-in Bank	912	1 Drive-Thru Lanes	150 FCE	5 (61%)	5 (39%)	10 FCE	10 (49%)	15 (51%)	25 (27.07)	15 (49%)	15 (51%)	30 (27.67)
Total Trips			**19,660**	**600**	**605**	**1,205**	**815**	**770**	**1,585**	**1,020**	**980**	**2,000**
Minus Linked Trips	*(813)*	*10%*	*-810*	*-15*	*-15*	*-30*	*-35*	*-35*	*-70*	*-40*	*-40*	*-80*
Minus Linked Trips	*WisDOT*	*10%*	*-120*	*-5*	*-5*	*-10*	*-5*	*-5*	*-10*	*-5*	*-5*	*-10*
Minus Linked Trips	*(934)*	*10%*	*-190*	*-10*	*-10*	*-20*	*-5*	*-5*	*-10*	*-10*	*-10*	*-20*
Minus Linked Trips	*(948)*	*10%*	*-60*	*0*	*0*	*0*	*-5*	*-5*	*-10*	*0*	*0*	*0*
Minus Linked Trips	*(934)*	*10%*	*-570*	*-25*	*-25*	*-50*	*-20*	*-20*	*-40*	*-35*	*-30*	*-65*
Total Linked Trips (Minus)			**(1,750)**	**(55)**	**(55)**	**(110)**	**(70)**	**(70)**	**(140)**	**(90)**	**(85)**	**(175)**
Total Driveway Trips			**17,910**	**545**	**550**	**1,095**	**745**	**700**	**1,445**	**930**	**895**	**1,825**
Minus Pass-by Trips	*(220)*	*0%*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Minus Pass-by Trips	*(813)*	*20%*	*-1,450*	*-30*	*-30*	*-60*	*-60*	*-65*	*-125*	*-55*	*-55*	*-110*
Minus Pass-by Trips	*WisDOT*	*30%*	*-340*	*-10*	*-10*	*-20*	*-15*	*-15*	*-30*	*-10*	*-10*	*-20*
Minus Pass-by Trips	*(934)*	*35%*	*-590*	*-30*	*-30*	*-60*	*-30*	*-25*	*-55*	*-15*	*-15*	*-30*
Minus Pass-by Trips	*(948)*	*20%*	*-110*	*-5*	*-5*	*-10*	*-5*	*-5*	*-10*	*-5*	*-5*	*-10*
Minus Pass-by Trips	*(934)*	*30%*	*-1,550*	*-65*	*-65*	*-130*	*-80*	*-80*	*-160*	*-45*	*-45*	*-90*
Total Pass-by Trips (Minus)			**(4,040)**	**(140)**	**(140)**	**(280)**	**(190)**	**(190)**	**(380)**	**(130)**	**(130)**	**(260)**
Total New Trips			**13,870**	**405**	**410**	**815**	**555**	**510**	**1,065**	**800**	**765**	**1,565**

1) Automated Car Wash AM Peak Hour volumes were estimated based on 50% of the PM peak hour volumes, due to lack of ITE Trip Generation Data.
2) Proposed fast-food restaurant generated trips are based on two existing sites in Brookfield, WI.

TRIP DISTRIBUTION

West on McKee Rd	40%	5550	160	165		220	205	320	305
East on McKee Rd	38%	5270	155	170		210	215	305	320
South on Fitchrona Rd	8%	1110	35	35		45	40	65	60
North on Fitchrona Rd	10%	1390	40	40		55	50	80	80
North on Kapec Rd	4%	550	15	0		25	0	30	0
	100%	***13870***	***405***	***410***		***555***	***510***	***800***	***765***

TRIP DISTRIBUTION (Pass-by Trips)

West on McKee Rd	50%	-2020	-70	-70		-95	-95	-65	-65
East on McKee Rd	50%	-2020	-70	-70		-95	-95	-65	-65
	100%	***-4040***	***-140***	***-140***		***-190***	***-190***	***-130***	***-130***

TRAFFIC ANALYSIS & DESIGN, INC.
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N
NOT TO SCALE

EXHIBIT 6
ON-SITE TRIP GENERATION AND DISTRIBUTION TABLES

FITCHBURG, WI

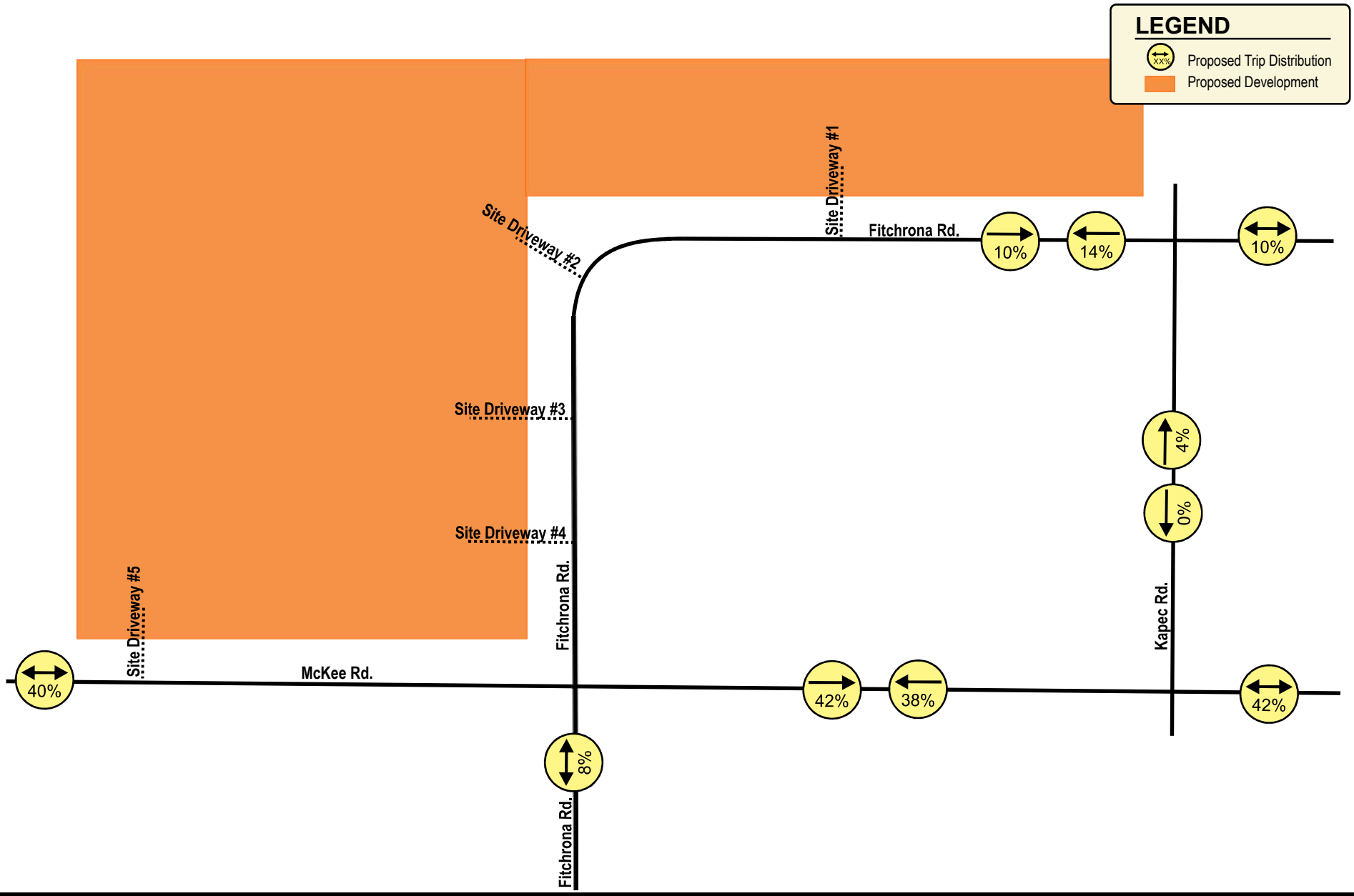

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EXHIBIT 7
TRIP DISTRIBUTION PERCENTAGES

FITCHBURG, WI

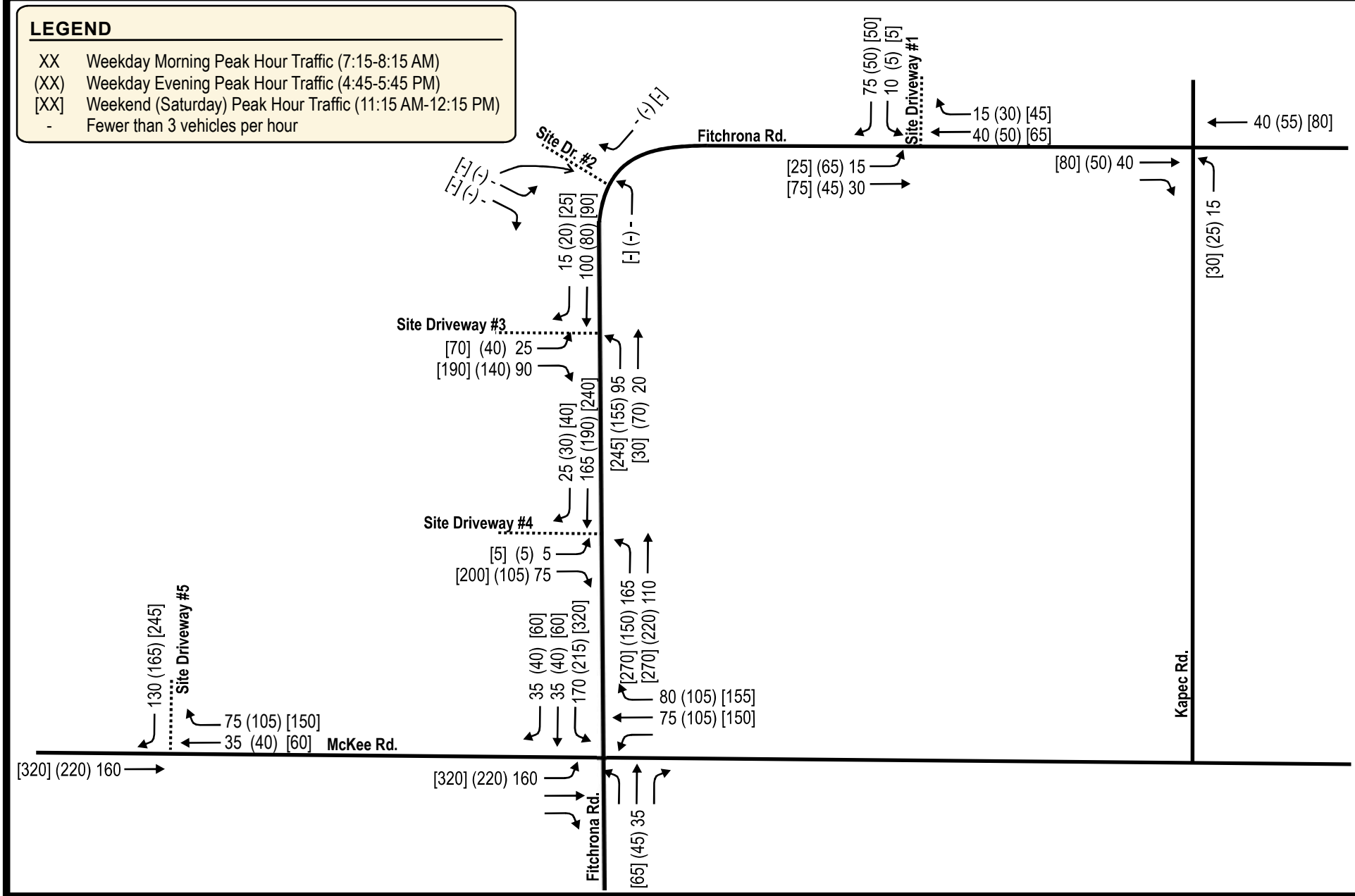

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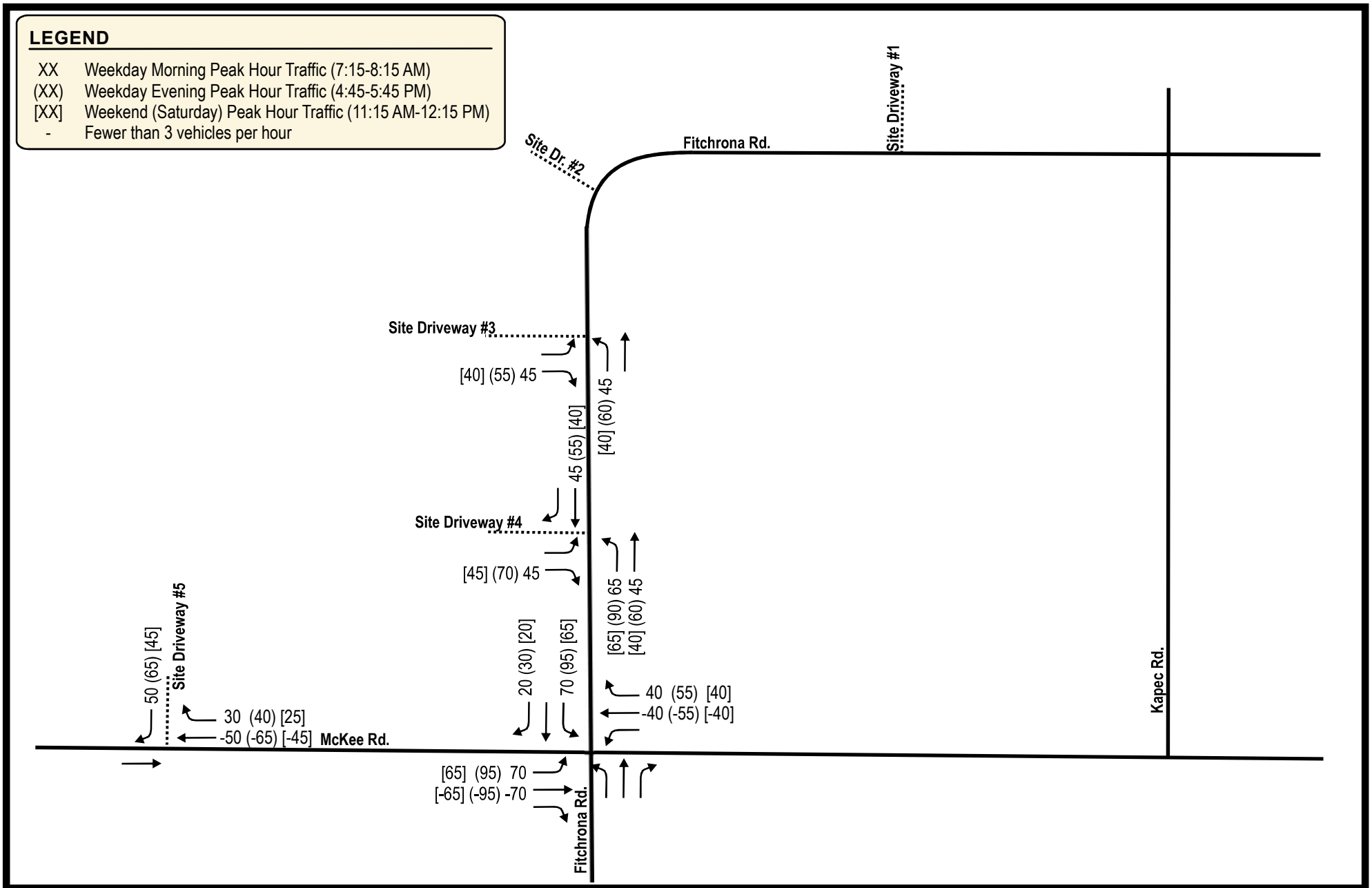
EXHIBIT 8
ON-SITE DEVELOPMENT NEW TRIPS

FITCHBURG, WI



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N

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EXHIBIT 9
ON-SITE DEVELOPMENT PASS-BY TRIPS

FITCHBURG, WI

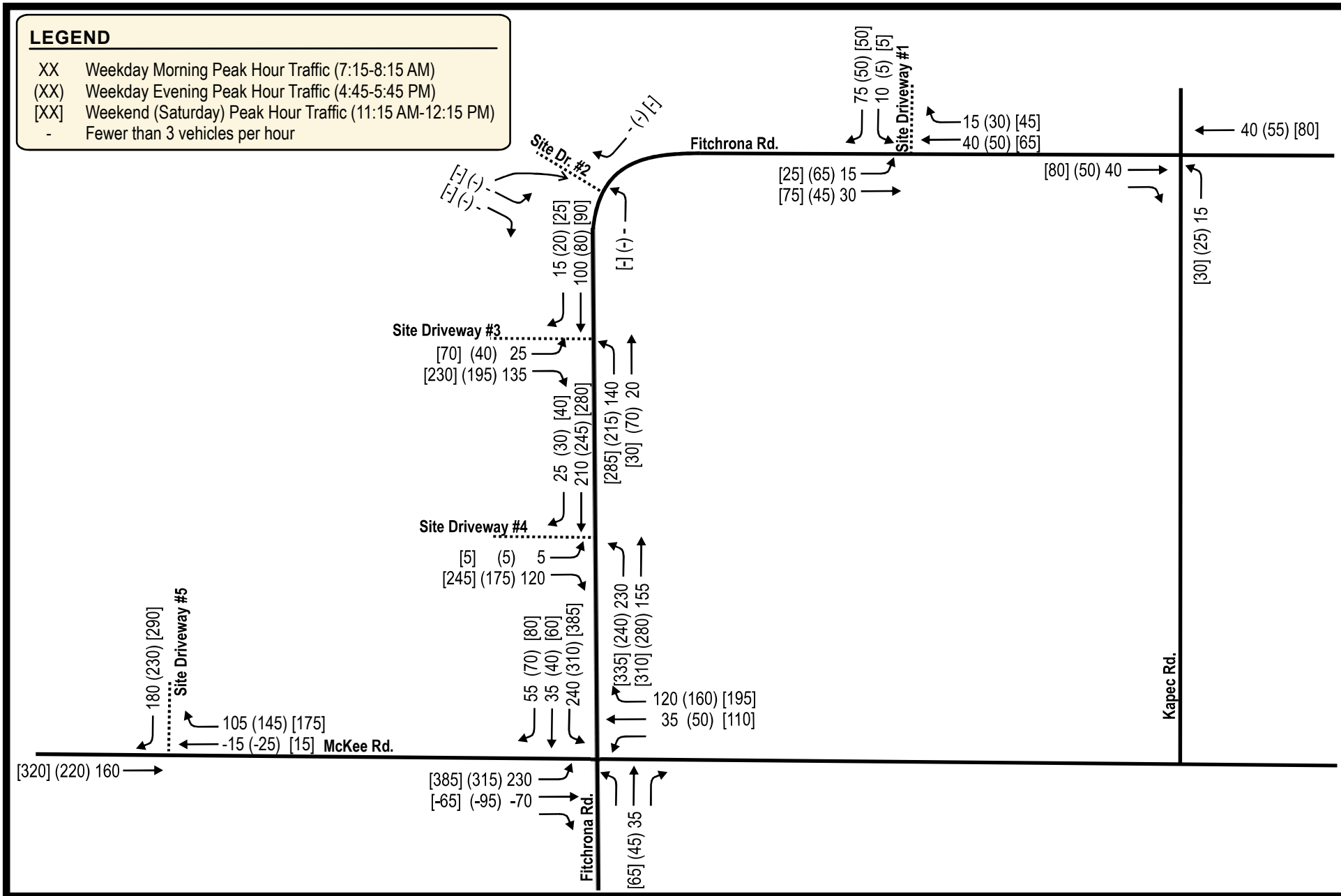

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EXHIBIT 10
ON-SITE DEVELOPMENT DRIVEWAY TRIPS

FITCHBURG, WI

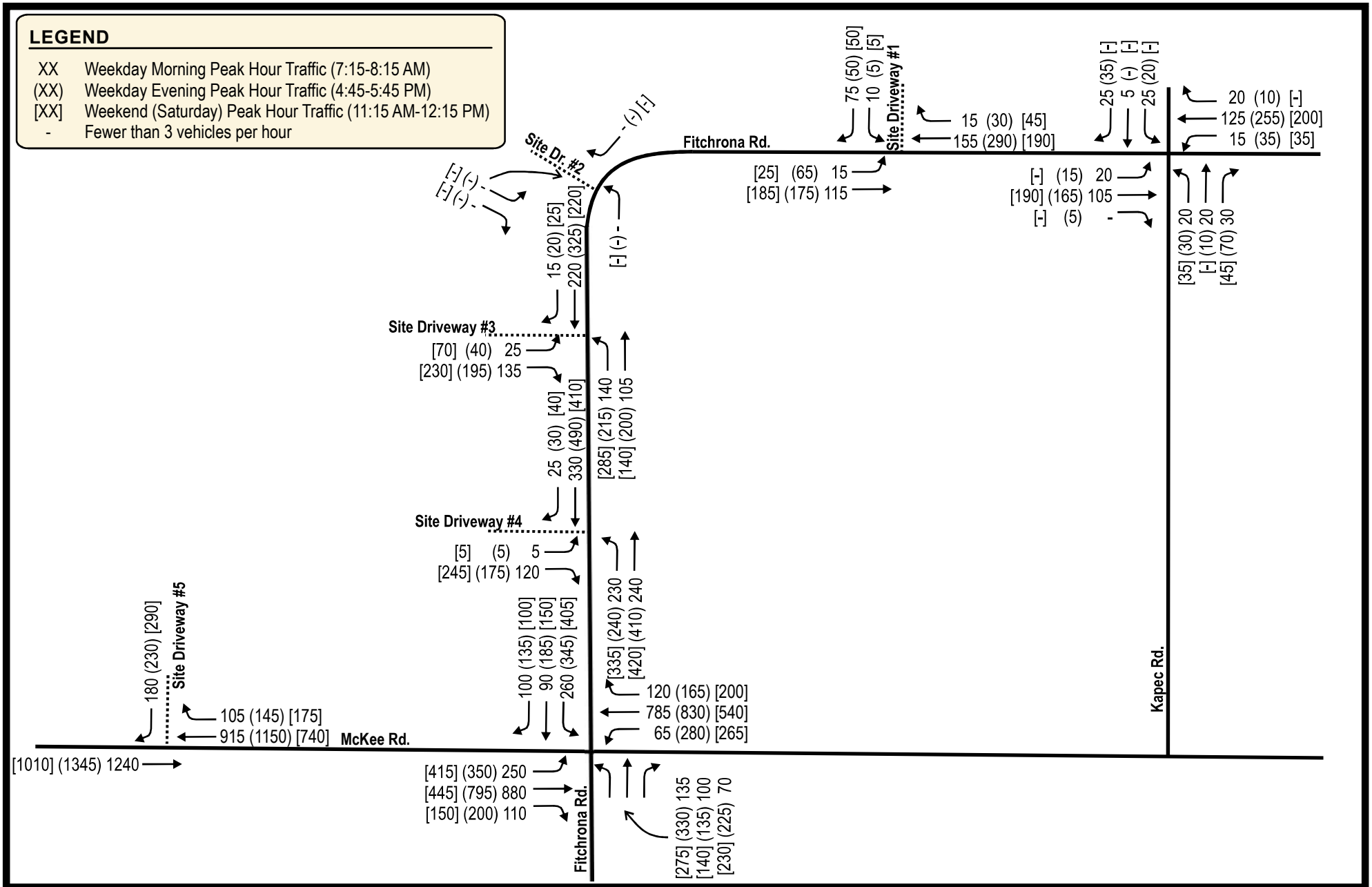

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EXHIBIT 11
YEAR 2025 BUILD TRAFFIC VOLUMES

FITCHBURG, WI

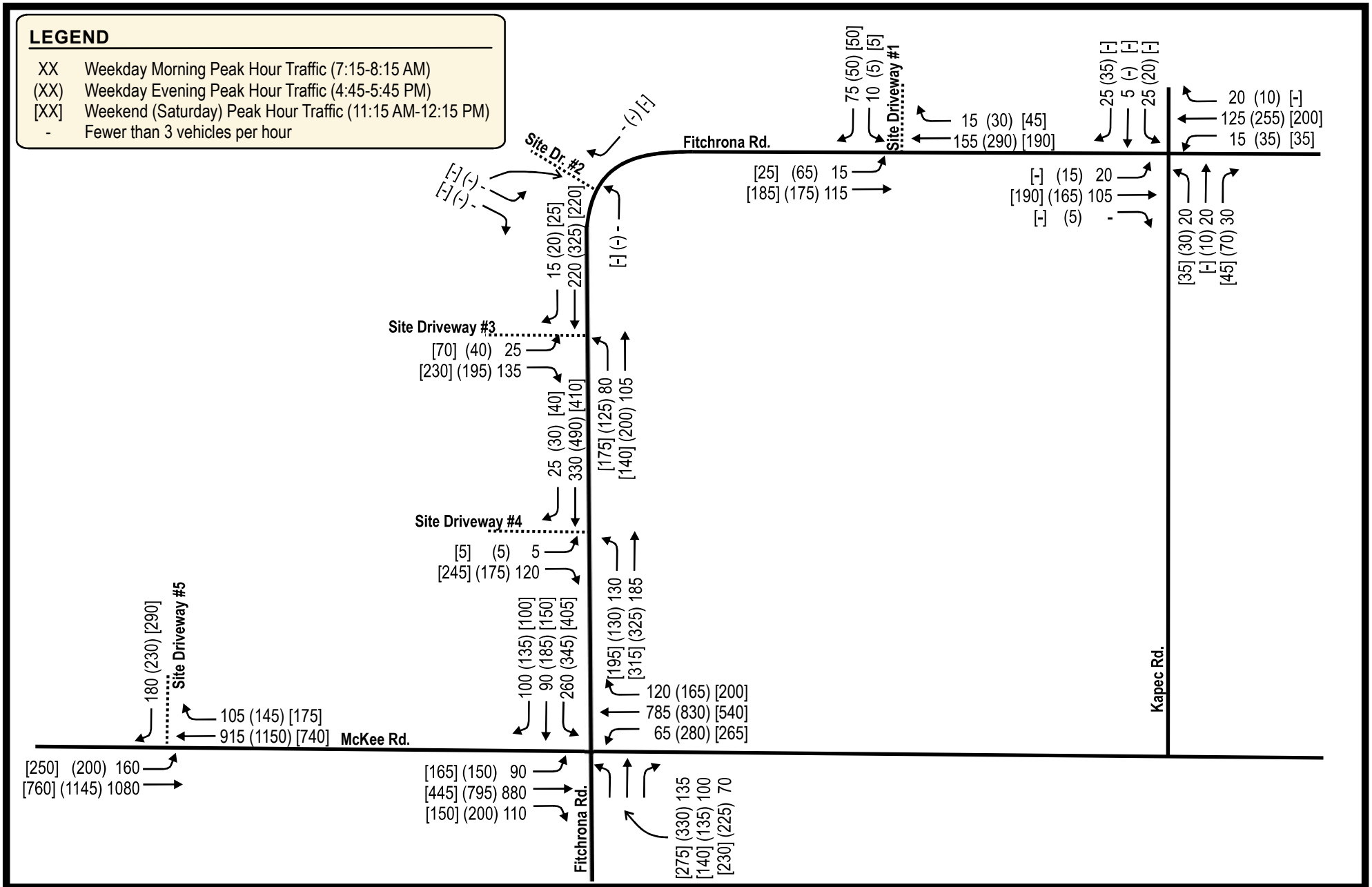

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EXHIBIT 12
YEAR 2025 BUILD TRAFFIC VOLUMES
ALTERNATIVE GEOMETRY

FITCHBURG, WI

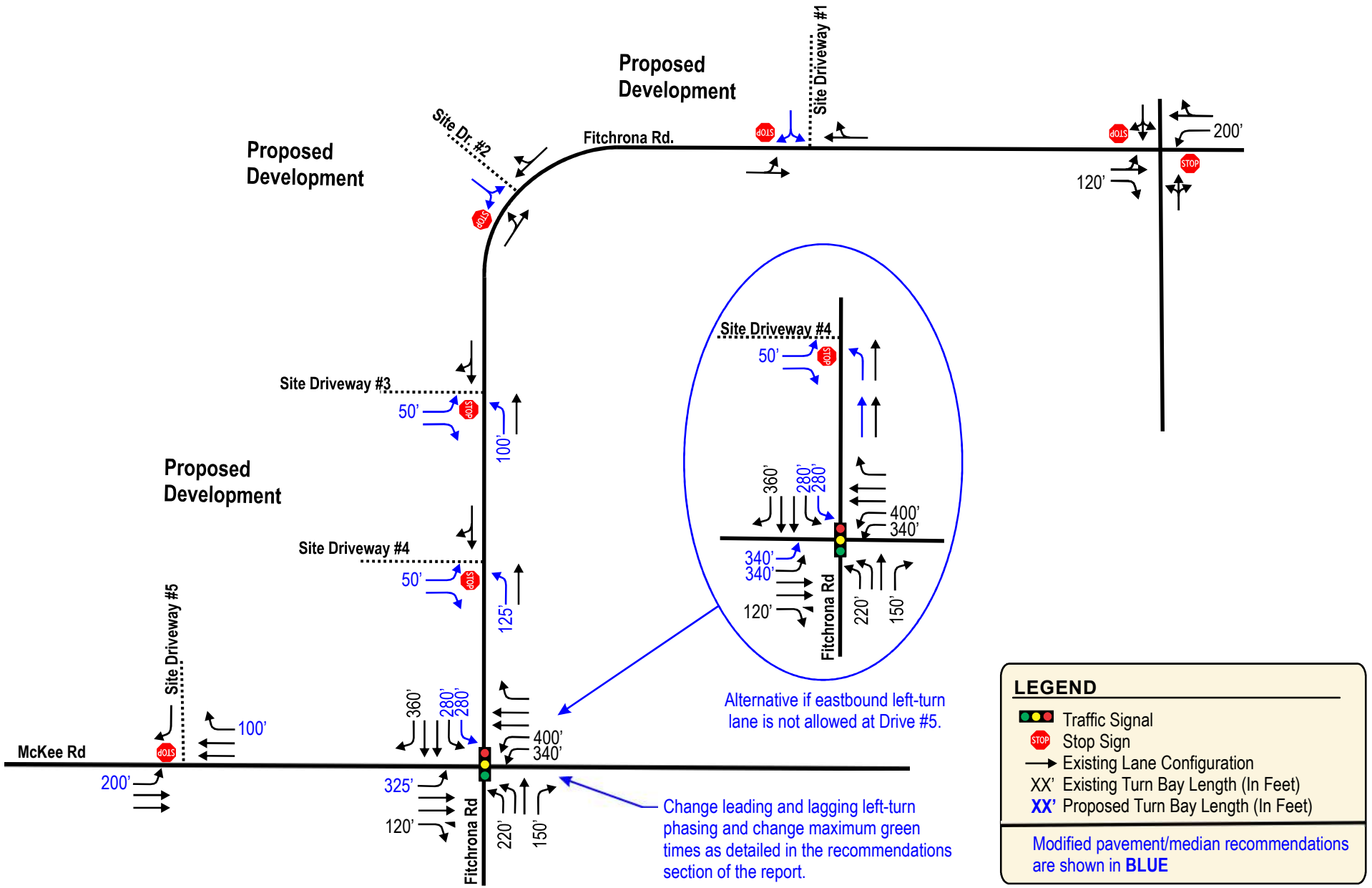

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EXHIBIT 13
RECOMMENDED MODIFICATIONS

FITCHBURG, WI

Appendix A
Traffic

Existing Turning Movement Counts

Saturation Flow Rate Calculations

McKee Road & Fitchrona Road Signal Timings

Intersection Traffic Volume Report

Count Basics	Version 2024.04		Page 1 of 13
Start Date:	Monday, April 15, 2024	Weekday	Schools in Session
Total Number of Hours Counted: 6		Non-Holiday	No Special Events

Base Information, Observed (6) Hour and Estimated (24) Hour Volume Summaries

Major St: **Fitchroma Road**
Minor St: **McKee Road**
Intersection of: ***Fitchroma Road & McKee Road*** **IX_ID:**

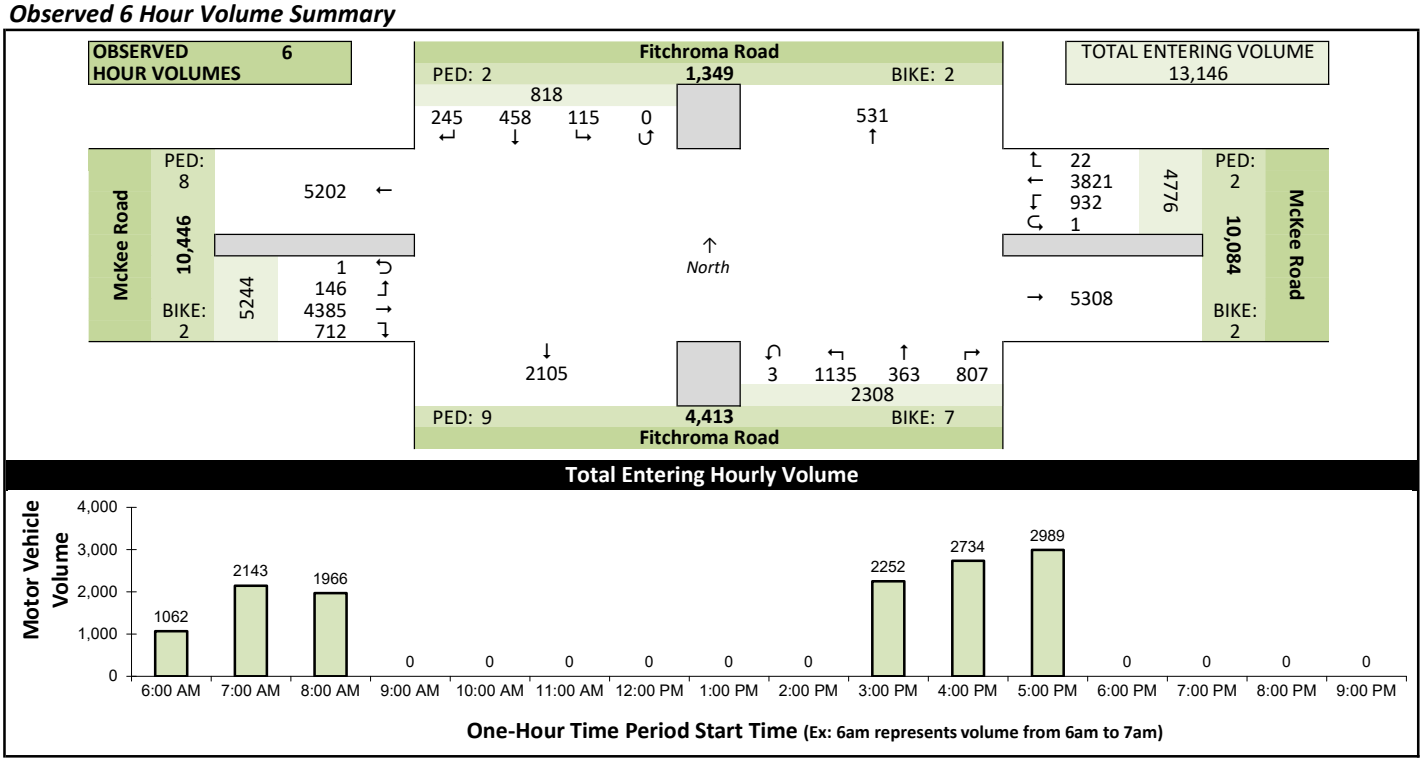
Site Information

Municipality	City of Fitchburg		
County	13 - Dane	WisDOT Region	SW-M
Traffic Control	Traffic Signal		
Roadway Names		North Direction	↑
North Leg	Fitchroma Road		
East Leg	McKee Road		
South Leg	Fitchroma Road		
West Leg	McKee Road		
Special Considerations			
Schools	In Session		
Holidays	None		
Special Events	None		
Special Pedestrians Observed			
Pre-school children	None		
Elementry school age children	None		
Visually impaired (white cane/helper dog)	None		
Elderly/disabled (except wheelchairs)	None		
Wheelchairs/electric scooters	None		
Other (describe)	None	None	

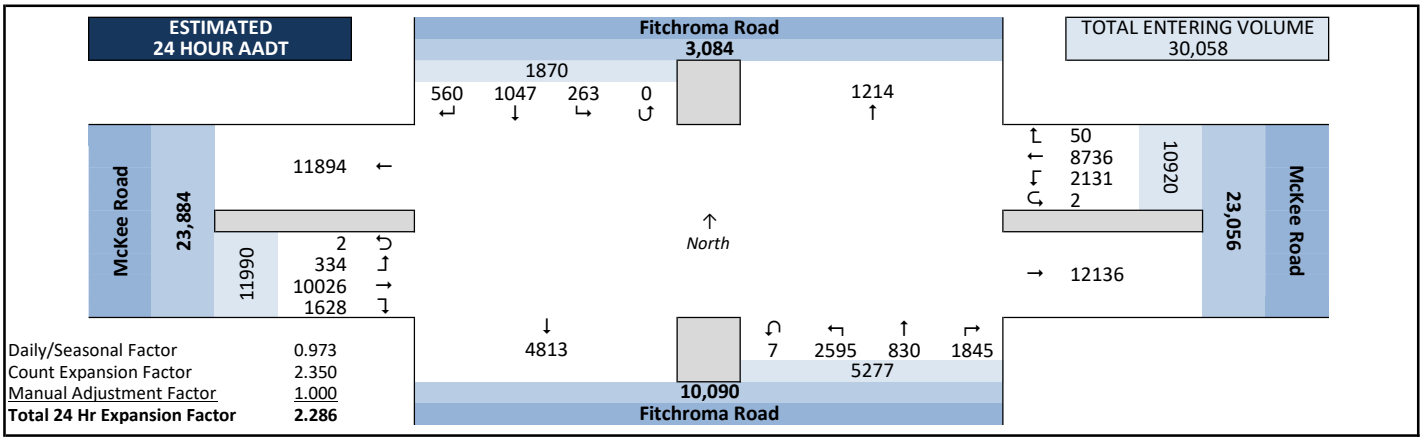
Count Information

Hrs Counted:	06:00 AM-09:00 AM and 03:00 PM-06:00 PM				
1st Day of Count	Monday, April 15, 2024			Weather	
AM Peak Period	Tuesday, April 16, 2024			Clear & Dry	
Midday Peak Period	Tuesday, April 16, 2024			Clear & Dry	
PM Peak Period	Monday, April 15, 2024			Clear & Dry	
Calculated Peak Hours					
AM	7:30-8:30am	MD		PM	4:45-5:45pm
Peak Hours Selected for Analysis					
AM	7:15-8:15am	MD		PM	4:45-5:45pm
Daily/Seasonal Adjustment Group	(2) Urban Arterials & Collectors				
Count Expansion Group	(2) Urban Arterials & Collectors				
Daily/Seasonal Adjustment Factor	0.973	Count Expansion Factor	2.350		
Company Name	TADI, Inc.			Manual Adj.	1.000
Observers	AM Peak Period	Video - Amy Scheuerlein			
	Midday Peak Period	None			
	PM Peak Period	Video - Amy Scheuerlein			
Comments	2021 DOT Daily & Seasonal Factors				

Observed 6 Hour Volume Summary



Estimated 24 Hour AADT



Daily/Seasonal Factor	0.973
Count Expansion Factor	2.350
Manual Adjustment Factor	1.000
Total 24 Hr Expansion Factor	**2.286**

Intersection Traffic Volume Report

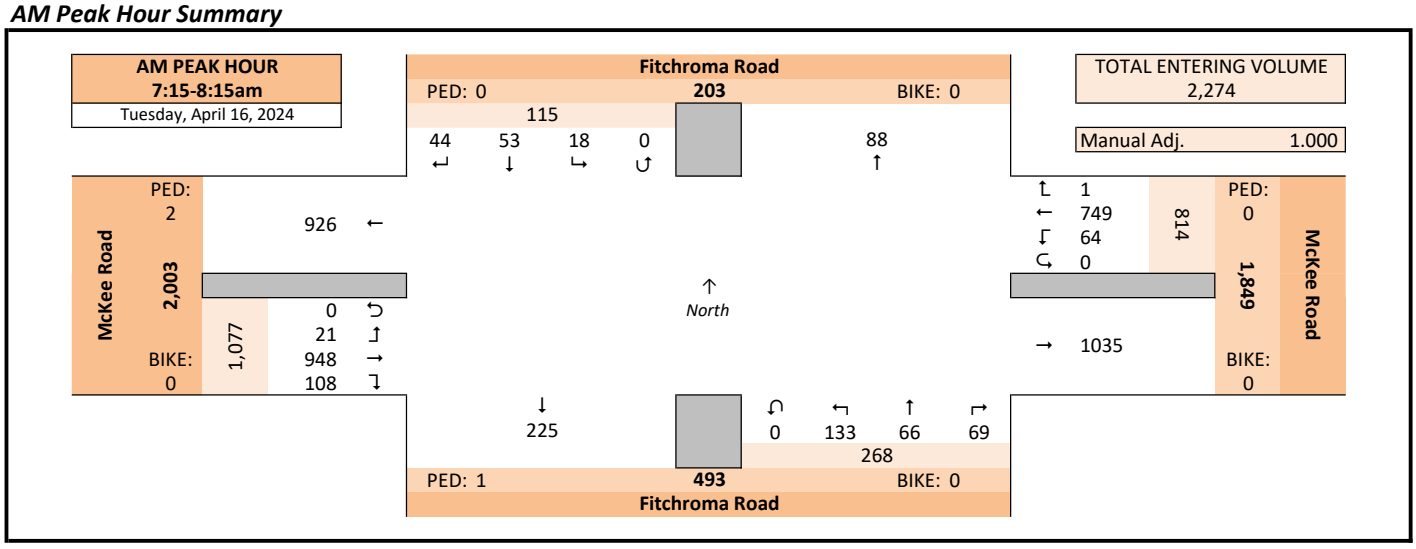
Peak Hour Volume Graphical Summary

Fitchroma Road & McKee Road

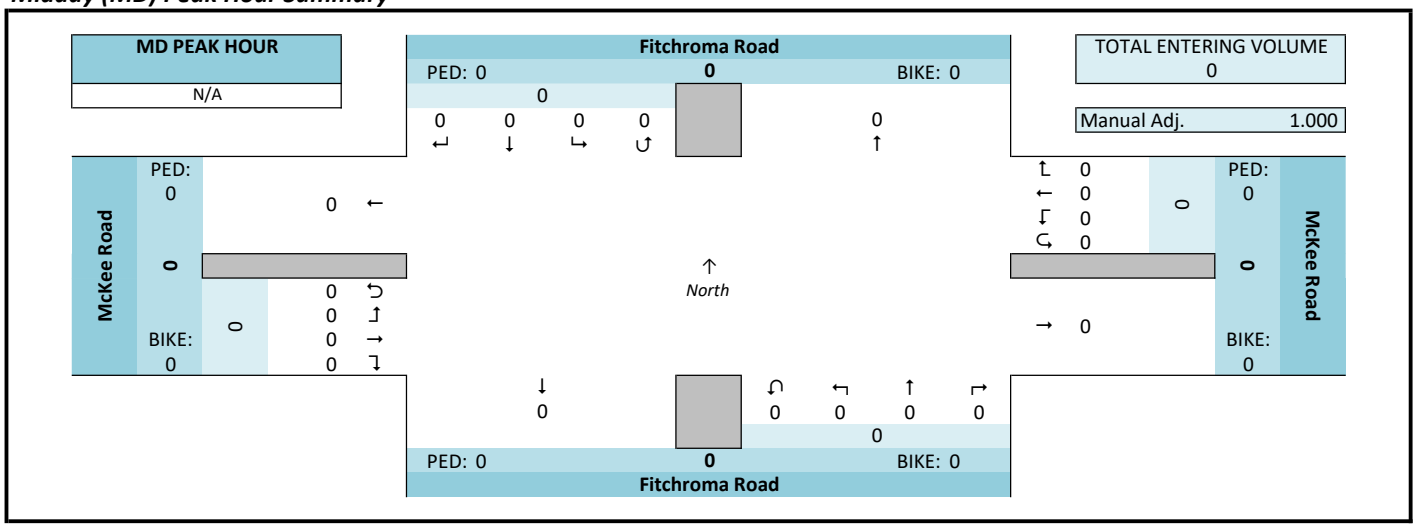
Count Basics			*Page 2 of 13*
Start Date:	Monday, April 15, 2024	Weekday	Schools in Session
Total Number of Hours Counted: 6		Non-Holiday	No Special Events

All Motor Vehicles

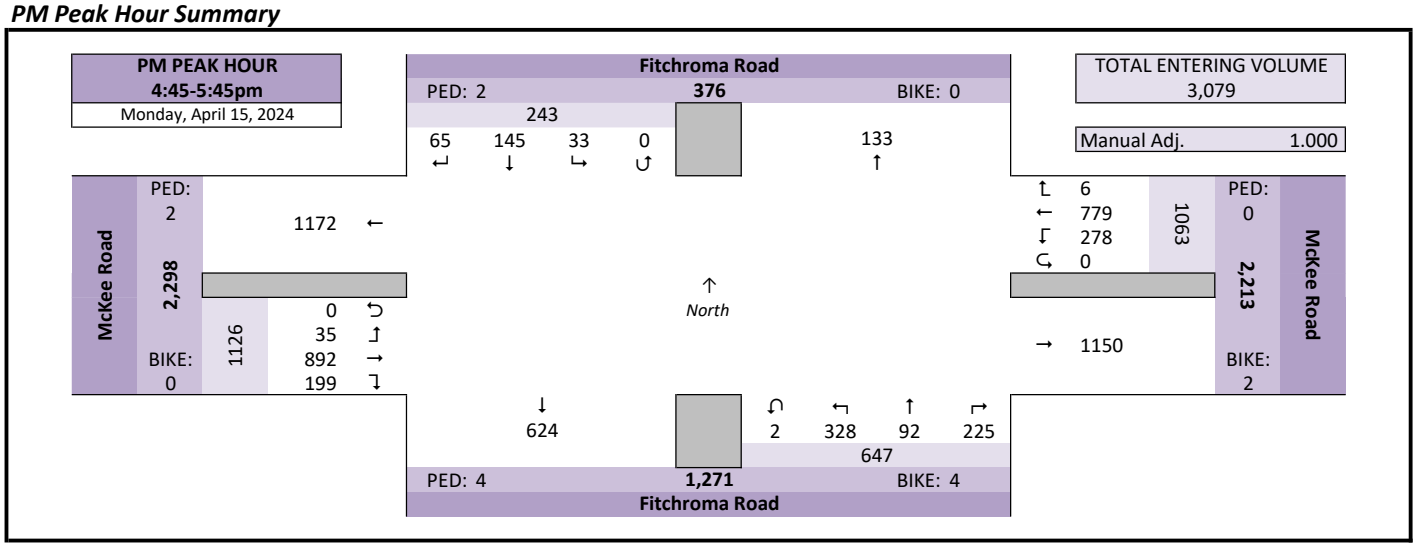
AM Peak Hour Summary



Midday (MD) Peak Hour Summary



PM Peak Hour Summary



Intersection Traffic Volume Report

Count Basics			Page 3 of 13
Start Date:	Monday, April 15, 2024	Weekday	Schools in Session
Total Number of Hours Counted: 6		Non-Holiday	No Special Events

Peak Hour Volume Summary

Fitchroma Road & McKee Road

All Motor Vehicles

Peak Hour Volumes, Truck Percentages, and PHFs

Tuesday, April 16, 2024		From North					From East					From South					From West					
	AM Peak Hour	Fitchroma Road					McKee Road					Fitchroma Road					McKee Road					
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
AM Peak Hour	7:15 AM	13	10	4	0	27	0	190	8	0	198	11	14	19	0	44	29	223	3	0	255	524
	7:30 AM	6	9	6	0	21	0	179	14	0	193	19	18	32	0	69	23	273	4	0	300	583
	7:45 AM	15	18	6	0	39	0	192	22	0	214	25	22	37	0	84	32	261	9	0	302	639
	8:00 AM	10	16	2	0	28	1	188	20	0	209	14	12	45	0	71	24	191	5	0	220	528
	Peak Hour Volume	44	53	18	0	115	1	749	64	0	814	69	66	133	0	268	108	948	21	0	1077	2274
	Rounded Hourly Volume	45	55	20	0	120	0	750	65	0	815	70	65	135	0	270	110	950	20	0	1080	2285
	% Single Unit Trucks	4.5	3.8	11.1	0.0	5.2	0.0	7.9	6.2	0.0	7.7	2.9	3.0	3.0	0.0	3.0	0.9	5.9	9.5	0.0	5.5	6.0
	% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.4	0.4
	% Trucks (Total)	4.5	3.8	11.1	0.0	5.2	0.0	8.5	6.2	0.0	8.4	2.9	3.0	3.0	0.0	3.0	0.9	6.3	9.5	0.0	5.8	6.4
	Peak Hour Factor (PHF)	0.73	0.74	0.75	0.00	0.74	0.25	0.98	0.73	0.00	0.95	0.69	0.75	0.74	0.00	0.80	0.84	0.87	0.58	0.00	0.89	0.89

N/A		From North					From East					From South					From West					
	MD Peak Hour	Fitchroma Road					McKee Road					Fitchroma Road					McKee Road					
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
Midday (MD) Peak Hour	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Peak Hour Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Rounded Hourly Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	% Single Unit Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	% Trucks (Total)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Peak Hour Factor (PHF)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Monday, April 15, 2024		From North					From East					From South					From West					
	PM Peak Hour	Fitchroma Road					McKee Road					Fitchroma Road					McKee Road					
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
PM Peak Hour	4:45 PM	11	45	7	0	63	1	192	72	0	265	50	30	79	0	159	49	183	8	0	240	727
	5:00 PM	14	36	8	0	58	5	213	58	0	276	67	25	84	0	176	47	227	11	0	285	795
	5:15 PM	20	36	9	0	65	0	215	90	0	305	45	28	81	1	155	55	245	10	0	310	835
	5:30 PM	20	28	9	0	57	0	159	58	0	217	63	9	84	1	157	48	237	6	0	291	722
	Peak Hour Volume	65	145	33	0	243	6	779	278	0	1063	225	92	328	2	647	199	892	35	0	1126	3079
	Rounded Hourly Volume	65	145	35	0	245	5	780	280	0	1065	225	90	330	0	645	200	890	35	0	1125	3080
	% Single Unit Trucks	1.5	2.1	0.0	0.0	1.6	0.0	2.3	0.4	0.0	1.8	1.8	3.3	0.3	0.0	1.2	1.0	1.8	0.0	0.0	1.6	1.6
	% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	% Trucks (Total)	1.5	2.1	0.0	0.0	1.6	0.0	2.3	0.4	0.0	1.8	1.8	3.3	0.3	0.0	1.2	1.0	1.8	0.0	0.0	1.6	1.6
	Peak Hour Factor (PHF)	0.81	0.81	0.92	0.00	0.93	0.30	0.91	0.77	0.00	0.87	0.84	0.77	0.98	0.50	0.92	0.90	0.91	0.80	0.00	0.91	0.92

Peak Hour Pedestrian and Bicyclist Volumes

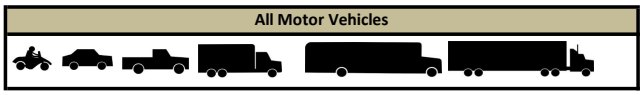
Pedestrians and Bicyclists		Crossing North Approach			Crossing East Approach			Crossing South Approach			Crossing West Approach			Total Ped & Bike Volume
		Fitchroma Road			McKee Road			Fitchroma Road			McKee Road			
	15-Minute Start Time	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	
AM	7:15 AM	0	0	0	0	0	0	1	0	1	1	0	1	2
	7:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	1	0	1	2	0	2	3
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:45 PM	0	0	0	0	0	0	0	2	2	0	0	0	2
	5:00 PM	0	0	0	0	0	0	1	0	1	0	0	0	1
	5:15 PM	0	0	0	0	1	1	0	0	0	0	0	0	1
	5:30 PM	2	0	2	0	1	1	3	2	5	2	0	2	10
	Total	2	0	2	0	2	2	4	4	8	2	0	2	14

Intersection Traffic Volume Report

Count Basics		Page 4 of 13
Start Date: Monday, April 15, 2024	Weekday	Schools in Session
Total Number of Hours Counted: 6	Non-Holiday	No Special Events

Hourly Volume Summary - Motor Vehicle Data

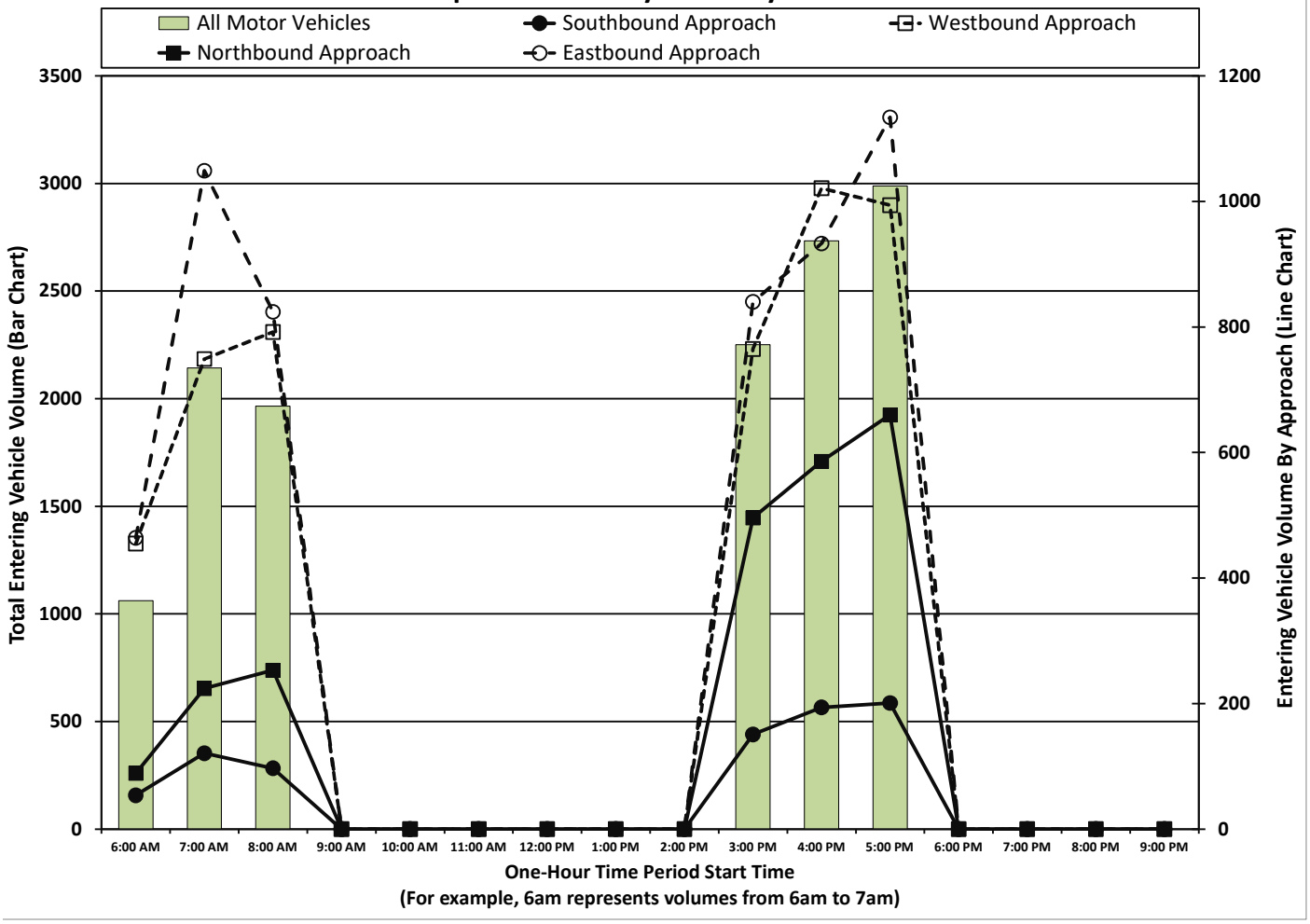
Fitchroma Road & McKee Road



One-Hour Motor Vehicle Data

One-Hour Time Period Start Time		From North (↓) Fitchroma Road					From East (←) McKee Road					From South (↑) Fitchroma Road					From West (→) McKee Road					Total Vehicle Volume	Directional Volume Totals E/W	Directional Volume Totals N/S
		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total			
AM	6:00 AM	26	20	8	0	54	3	431	21	0	455	30	11	48	0	89	23	436	4	1	464	1062	919	143
AM	7:00 AM	49	53	19	0	121	0	699	50	0	749	66	56	102	0	224	97	934	18	0	1049	2143	1798	345
AM	8:00 AM	36	45	16	0	97	7	678	107	0	792	72	50	131	0	253	77	725	22	0	824	1966	1616	350
AM	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MD	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MD	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MD	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:00 PM	38	93	20	0	151	0	541	223	1	765	202	76	218	0	496	134	671	35	0	840	2252	1605	647
PM	4:00 PM	39	132	23	0	194	6	740	275	0	1021	198	95	292	1	586	178	721	34	0	933	2734	1954	780
PM	5:00 PM	57	115	29	0	201	6	732	256	0	994	239	75	344	2	660	203	898	33	0	1134	2989	2128	861
PM	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals		245	458	115	0	818	22	3821	932	1	4776	807	363	1135	3	2308	712	4385	146	1	5244	13146	10020	3126

Graphical Summary of Hourly Volumes



Intersection Traffic Volume Report

15-Minute Motor Vehicle Data

Fitchroma Road & McKee Road

Count Basics		*Page 5 of 13*
Start Date: Monday, April 15, 2024	Weekday	Schools in Session
Total Number of Hours Counted: 6	Non-Holiday	No Special Events

All Motor Vehicles

15-Minute Motor Vehicle Data

15-Minute Time Period		From North (↓) Fitchroma Road					From East (←) McKee Road					From South (↑) Fitchroma Road					From West (→) McKee Road					15-Min	Hourly	
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals	Sum	PHF
AM Peak Period	6:00 AM	7	2	1	0	10	0	68	4	0	72	9	1	4	0	14	7	75	0	0	82	178	1062	0.82
	6:15 AM	4	4	2	0	10	0	115	3	0	118	5	4	15	0	24	2	97	1	0	100	252	1281	0.81
	6:30 AM	7	8	2	0	17	1	131	2	0	134	4	2	15	0	21	5	127	3	1	136	308	1553	0.74
	6:45 AM	8	6	3	0	17	2	117	12	0	131	12	4	14	0	30	9	137	0	0	146	324	1828	0.78
	7:00 AM	15	16	3	0	34	0	138	6	0	144	11	2	14	0	27	13	177	2	0	192	397	2143	0.84
	7:15 AM	13	10	4	0	27	0	190	8	0	198	11	14	19	0	44	29	223	3	0	255	524	2274	0.89
	7:30 AM	6	9	6	0	21	0	179	14	0	193	19	18	32	0	69	23	273	4	0	300	583	2279	0.89
	7:45 AM	15	18	6	0	39	0	192	22	0	214	25	22	37	0	84	32	261	9	0	302	639	2132	0.83
	8:00 AM	10	16	2	0	28	1	188	20	0	209	14	12	45	0	71	24	191	5	0	220	528	1966	0.93
	8:15 AM	5	12	3	0	20	3	200	25	0	228	18	17	28	0	63	14	196	8	0	218	529		
	8:30 AM	12	3	2	0	17	2	140	24	0	166	24	10	25	0	59	13	175	6	0	194	436		
	8:45 AM	9	14	9	0	32	1	150	38	0	189	16	11	33	0	60	26	163	3	0	192	473		
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	3:00 PM	8	17	4	0	29	0	112	38	1	151	45	15	48	0	108	26	134	4	0	164	452	2252	0.89
	3:15 PM	8	26	5	0	39	0	143	58	0	201	55	17	49	0	121	23	143	7	0	173	534	2407	0.95
	3:30 PM	11	26	2	0	39	0	155	60	0	215	47	15	67	0	129	42	193	14	0	249	632	2579	0.91
	3:45 PM	11	24	9	0	44	0	131	67	0	198	55	29	54	0	138	43	201	10	0	254	634	2641	0.94
	4:00 PM	7	31	5	0	43	0	167	54	0	221	48	24	65	0	137	50	148	8	0	206	607	2734	0.94
	4:15 PM	11	30	6	0	47	4	195	69	0	268	51	21	74	0	146	38	196	11	0	245	706	2922	0.92
	4:30 PM	10	26	5	0	41	1	186	80	0	267	49	20	74	1	144	41	194	7	0	242	694	3051	0.91
	4:45 PM	11	45	7	0	63	1	192	72	0	265	50	30	79	0	159	49	183	8	0	240	727	3079	0.92
	5:00 PM	14	36	8	0	58	5	213	58	0	276	67	25	84	0	176	47	227	11	0	285	795	2989	0.89
	5:15 PM	20	36	9	0	65	0	215	90	0	305	45	28	81	1	155	55	245	10	0	310	835		
	5:30 PM	20	28	9	0	57	0	159	58	0	217	63	9	84	1	157	48	237	6	0	291	722		
	5:45 PM	3	15	3	0	21	1	145	50	0	196	64	13	95	0	172	53	189	6	0	248	637		
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Totals		245	458	115	0	818	22	3821	932	1	4776	807	363	1135	3	2308	712	4385	146	1	5244	13146		

Peak Hour All Vehicle Volume Summary

Hourly Time Period		From North (↓) Fitchroma Road					From East (←) McKee Road					From South (↑) Fitchroma Road					From West (→) McKee Road					Total Hourly	
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Volume	PHF
AM	7:15 AM	44	53	18	0	115	1	749	64	0	814	69	66	133	0	268	108	948	21	0	1077	2274	0.89
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM	4:45 PM	65	145	33	0	243	6	779	278	0	1063	225	92	328	2	647	199	892	35	0	1126	3079	0.92

Intersection Traffic Volume Report

Count Basics			*Page 6 of 13*
Start Date:	Monday, April 15, 2024	Weekday	Schools in Session
Total Number of Hours Counted: 6		Non-Holiday	No Special Events

15-Minute Automobile Data

Fitchroma Road & McKee Road

Automobiles (Cars, Light Trucks, & Motorcycles)

15-Minute Automobile Data

15-Minute Time Period		From North (↓) Fitchroma Road					From East (←) McKee Road					From South (↑) Fitchroma Road					From West (→) McKee Road					15-Min	Hourly
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals	Sum
AM Peak Period	6:00 AM	7	2	1	0	10	0	66	3	0	69	7	0	4	0	11	7	73	0	0	80	170	1013
	6:15 AM	4	3	1	0	8	0	110	3	0	113	5	3	14	0	22	1	97	1	0	99	242	1202
	6:30 AM	7	8	2	0	17	1	123	2	0	126	4	2	15	0	21	5	124	3	1	133	297	1440
	6:45 AM	8	4	3	0	15	1	108	11	0	120	12	3	13	0	28	8	133	0	0	141	304	1689
	7:00 AM	12	15	3	0	30	0	118	5	0	123	10	0	13	0	23	13	169	1	0	183	359	1991
	7:15 AM	13	9	3	0	25	0	165	7	0	172	11	13	19	0	43	29	208	3	0	240	480	2129
	7:30 AM	6	9	6	0	21	0	166	14	0	180	17	18	28	0	63	23	255	4	0	282	546	2146
	7:45 AM	13	18	6	0	37	0	179	19	0	198	25	21	37	0	83	31	248	9	0	288	606	2010
	8:00 AM	10	15	1	0	26	1	175	20	0	196	14	12	45	0	71	24	177	3	0	204	497	1844
	8:15 AM	5	10	2	0	17	1	190	24	0	215	18	16	27	0	61	12	184	8	0	204	497	
	8:30 AM	12	3	2	0	17	2	130	24	0	156	22	8	25	0	55	13	164	5	0	182	410	
	8:45 AM	9	13	9	0	31	0	135	37	0	172	15	11	33	0	59	26	150	2	0	178	440	
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:00 PM	8	14	1	0	23	0	105	38	1	144	43	15	48	0	106	24	124	4	0	152	425	2175
	3:15 PM	8	25	5	0	38	0	135	58	0	193	55	16	47	0	118	23	138	7	0	168	517	2330
	3:30 PM	11	25	2	0	38	0	148	60	0	208	46	15	66	0	127	42	190	14	0	246	619	2502
	3:45 PM	11	23	8	0	42	0	127	65	0	192	55	27	54	0	136	43	191	10	0	244	614	2558
	4:00 PM	7	30	5	0	42	0	156	54	0	210	48	23	65	0	136	48	137	7	0	192	580	2648
	4:15 PM	11	29	5	0	45	4	188	67	0	259	51	20	73	0	144	38	192	11	0	241	689	2853
	4:30 PM	10	25	5	0	40	1	181	79	0	261	48	20	73	1	142	41	184	7	0	232	675	2992
	4:45 PM	10	44	7	0	61	1	180	72	0	253	47	29	79	0	155	48	179	8	0	235	704	3030
	5:00 PM	14	35	8	0	57	5	211	58	0	274	66	24	84	0	174	47	222	11	0	280	785	2959
	5:15 PM	20	36	9	0	65	0	213	89	0	302	45	27	80	1	153	55	243	10	0	308	828	
	5:30 PM	20	27	9	0	56	0	157	58	0	215	63	9	84	1	157	47	232	6	0	285	713	
	5:45 PM	3	15	3	0	21	1	143	50	0	194	64	12	95	0	171	53	188	6	0	247	633	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		239	437	106	0	782	18	3609	917	1	4545	791	344	1121	3	2259	701	4202	140	1	5044	12630	

Peak Hour Automobile Volume Summary

Hourly Time Period		From North (↓) Fitchroma Road					From East (←) McKee Road					From South (↑) Fitchroma Road					From West (→) McKee Road					Total Hourly
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Volume
AM	7:15 AM	42	51	16	0	109	1	685	60	0	746	67	64	129	0	260	107	888	19	0	1014	2129
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:45 PM	64	142	33	0	239	6	761	277	0	1044	221	89	327	2	639	197	876	35	0	1108	3030

Intersection Traffic Volume Report

15-Minute Single Unit (SU) Truck & Bus Data

Count Basics		*Page 7 of 13*
Start Date: Monday, April 15, 2024	Weekday	Schools in Session
Total Number of Hours Counted: 6	Non-Holiday	No Special Events

Fitchroma Road & McKee Road

Single Unit (SU) Trucks & Buses

15-Minute Single Unit (SU) Truck & Bus Data

15-Minute Time Period		From North (↓) Fitchroma Road					From East (←) McKee Road					From South (↑) Fitchroma Road					From West (→) McKee Road					15-Min	Hourly
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals	Sum
AM Peak Period	6:00 AM	0	0	0	0	0	0	2	1	0	3	1	1	0	0	2	0	2	0	0	2	7	41
	6:15 AM	0	1	1	0	2	0	3	0	0	3	0	1	0	0	1	0	0	0	0	0	6	72
	6:30 AM	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	2	0	0	2	10	106
	6:45 AM	0	2	0	0	2	1	8	1	0	10	0	1	0	0	1	1	4	0	0	5	18	132
	7:00 AM	3	1	0	0	4	0	20	1	0	21	1	2	1	0	4	0	8	1	0	9	38	145
	7:15 AM	0	1	1	0	2	0	21	1	0	22	0	1	0	0	1	0	15	0	0	15	40	136
	7:30 AM	0	0	0	0	0	0	13	0	0	13	2	0	4	0	6	0	17	0	0	17	36	124
	7:45 AM	2	0	0	0	2	0	13	3	0	16	0	1	0	0	1	1	11	0	0	12	31	110
	8:00 AM	0	1	1	0	2	0	12	0	0	12	0	0	0	0	0	0	13	2	0	15	29	111
	8:15 AM	0	2	1	0	3	2	10	0	0	12	0	1	1	0	2	1	10	0	0	11	28	
	8:30 AM	0	0	0	0	0	0	10	0	0	10	1	2	0	0	3	0	8	1	0	9	22	
	8:45 AM	0	1	0	0	1	1	15	1	0	17	1	0	0	0	1	0	12	1	0	13	32	
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:00 PM	0	3	2	0	5	0	6	0	0	6	2	0	0	0	2	2	10	0	0	12	25	75
	3:15 PM	0	1	0	0	1	0	8	0	0	8	0	1	2	0	3	0	5	0	0	5	17	76
	3:30 PM	0	1	0	0	1	0	7	0	0	7	1	0	1	0	2	0	3	0	0	3	13	76
	3:45 PM	0	1	1	0	2	0	4	2	0	6	0	2	0	0	2	0	10	0	0	10	20	81
	4:00 PM	0	1	0	0	1	0	11	0	0	11	0	1	0	0	1	2	10	1	0	13	26	84
	4:15 PM	0	1	1	0	2	0	7	2	0	9	0	1	1	0	2	0	4	0	0	4	17	68
	4:30 PM	0	1	0	0	1	0	5	1	0	6	0	0	1	0	1	0	10	0	0	10	18	58
	4:45 PM	1	1	0	0	2	0	12	0	0	12	3	1	0	0	4	1	4	0	0	5	23	49
	5:00 PM	0	1	0	0	1	0	2	0	0	2	1	1	0	0	2	0	5	0	0	5	10	30
	5:15 PM	0	0	0	0	0	0	2	1	0	3	0	1	1	0	2	0	2	0	0	2	7	
	5:30 PM	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	1	5	0	0	6	9	
	5:45 PM	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1	4	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		6	21	8	0	35	4	203	14	0	221	13	19	12	0	44	9	171	6	0	186	486	

Peak Hour Single Unit (SU) Truck & Buses Volume Summary

Hourly Time Period		From North (↓) Fitchroma Road					From East (←) McKee Road					From South (↑) Fitchroma Road					From West (→) McKee Road					Total Hourly
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Volume
AM	7:15 AM	2	2	2	0	6	0	59	4	0	63	2	2	4	0	8	1	56	2	0	59	136
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:45 PM	1	3	0	0	4	0	18	1	0	19	4	3	1	0	8	2	16	0	0	18	49

Intersection Traffic Volume Report

15-Minute Semi-Truck Data

Count Basics		*Page 8 of 13*
Start Date: Monday, April 15, 2024	Weekday	Schools in Session
Total Number of Hours Counted: 6	Non-Holiday	No Special Events

Fitchroma Road & McKee Road

Semi-Trucks

15-Minute Semi-Truck Data

	15-Minute	From North (↓) Fitchroma Road					From East (←) McKee Road					From South (↑) Fitchroma Road					From West (→) McKee Road					15-Min	Hourly
	Time Period / Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals	Sum
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	8
	6:15 AM	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	1	0	0	0	1	4	7
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	7
	6:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	2	7
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
	7:15 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	4	9
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	9
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	12
	8:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	11
	8:15 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	2	0	0	3	4	
	8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	3	0	0	3	4	
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:00 PM	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2	2
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	2
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	1
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		0	0	1	0	1	0	9	1	0	10	3	0	2	0	5	2	12	0	0	14	30	

Peak Hour Semi-Truck Volume Summary

	Hourly Time Period / Start Time	From North (↓) Fitchroma Road					From East (←) McKee Road					From South (↑) Fitchroma Road					From West (→) McKee Road					Total Hourly Volume
		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	
AM	7:15 AM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	4	0	0	4	9
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Intersection Traffic Volume Report

15-Minute Heavy Vehicle Data

Count Basics			*Page 9 of 13*
Start Date:	Monday, April 15, 2024	Weekday	Schools in Session
Total Number of Hours Counted: 6		Non-Holiday	No Special Events

Fitchroma Road & McKee Road

Heavy Vehicles (Single-Unit Trucks, Buses & Semi-Trucks)

15-Minute Heavy Vehicle Data

15-Minute		From North (↓)					From East (←)					From South (↑)					From West (→)						
Time Period		Fitchroma Road					McKee Road					Fitchroma Road					McKee Road					15-Min	Hourly
Start Time		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals	Sum
AM Peak Period	6:00 AM	0	0	0	0	0	0	2	1	0	3	2	1	0	0	3	0	2	0	0	2	8	49
	6:15 AM	0	1	1	0	2	0	5	0	0	5	0	1	1	0	2	1	0	0	0	1	10	79
	6:30 AM	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	3	0	0	3	11	113
	6:45 AM	0	2	0	0	2	1	9	1	0	11	0	1	1	0	2	1	4	0	0	5	20	139
	7:00 AM	3	1	0	0	4	0	20	1	0	21	1	2	1	0	4	0	8	1	0	9	38	152
	7:15 AM	0	1	1	0	2	0	25	1	0	26	0	1	0	0	1	0	15	0	0	15	44	145
	7:30 AM	0	0	0	0	0	0	13	0	0	13	2	0	4	0	6	0	18	0	0	18	37	133
	7:45 AM	2	0	0	0	2	0	13	3	0	16	0	1	0	0	1	1	13	0	0	14	33	122
	8:00 AM	0	1	1	0	2	0	13	0	0	13	0	0	0	0	0	0	14	2	0	16	31	122
	8:15 AM	0	2	1	0	3	2	10	1	0	13	0	1	1	0	2	2	12	0	0	14	32	
	8:30 AM	0	0	0	0	0	0	10	0	0	10	2	2	0	0	4	0	11	1	0	12	26	
	8:45 AM	0	1	0	0	1	1	15	1	0	17	1	0	0	0	1	0	13	1	0	14	33	
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:00 PM	0	3	3	0	6	0	7	0	0	7	2	0	0	0	2	2	10	0	0	12	27	77
	3:15 PM	0	1	0	0	1	0	8	0	0	8	0	1	2	0	3	0	5	0	0	5	17	77
	3:30 PM	0	1	0	0	1	0	7	0	0	7	1	0	1	0	2	0	3	0	0	3	13	77
	3:45 PM	0	1	1	0	2	0	4	2	0	6	0	2	0	0	2	0	10	0	0	10	20	83
	4:00 PM	0	1	0	0	1	0	11	0	0	11	0	1	0	0	1	2	11	1	0	14	27	86
	4:15 PM	0	1	1	0	2	0	7	2	0	9	0	1	1	0	2	0	4	0	0	4	17	69
	4:30 PM	0	1	0	0	1	0	5	1	0	6	1	0	1	0	2	0	10	0	0	10	19	59
	4:45 PM	1	1	0	0	2	0	12	0	0	12	3	1	0	0	4	1	4	0	0	5	23	49
	5:00 PM	0	1	0	0	1	0	2	0	0	2	1	1	0	0	2	0	5	0	0	5	10	30
	5:15 PM	0	0	0	0	0	0	2	1	0	3	0	1	1	0	2	0	2	0	0	2	7	
	5:30 PM	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	1	5	0	0	6	9	
	5:45 PM	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1	4	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		6	21	9	0	36	4	212	15	0	231	16	19	14	0	49	11	183	6	0	200	516	

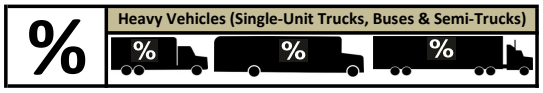
Peak Hour Heavy Vehicle Volume Summary

Hourly		From North (↓)					From East (←)					From South (↑)					From West (→)					Total
Time Period		Fitchroma Road					McKee Road					Fitchroma Road					McKee Road					Hourly
Start Time		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Volume
AM	7:15 AM	2	2	2	0	6	0	64	4	0	68	2	2	4	0	8	1	60	2	0	63	145
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:45 PM	1	3	0	0	4	0	18	1	0	19	4	3	1	0	8	2	16	0	0	18	49

Intersection Traffic Volume Report

Count Basics			*Page 10 of 13*
Start Date:	Monday, April 15, 2024	Weekday	Schools in Session
Total Number of Hours Counted: 6		Non-Holiday	No Special Events

15-Minute Heavy Vehicle Percentages



Fitchroma Road & McKee Road

15-Minute Heavy Vehicle Percentages

15-Minute Time Period Start Time		From North (↓) Fitchroma Road					From East (←) McKee Road					From South (↑) Fitchroma Road					From West (→) McKee Road					Total Heavy Vehicle Percent	Hourly Heavy Vehicle Percent
		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total		
AM Peak Period	6:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	2.9	25.0	0.0	4.2	22.2	100.0	0.0	0.0	21.4	0.0	2.7	0.0	0.0	2.4	4.5	4.6
	6:15 AM	0.0	25.0	50.0	0.0	20.0	0.0	4.3	0.0	0.0	4.2	0.0	25.0	6.7	0.0	8.3	50.0	0.0	0.0	0.0	1.0	4.0	6.2
	6:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	6.1	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	2.2	3.6	7.3
	6:45 AM	0.0	33.3	0.0	0.0	11.8	50.0	7.7	8.3	0.0	8.4	0.0	25.0	7.1	0.0	6.7	11.1	2.9	0.0	0.0	3.4	6.2	7.6
	7:00 AM	20.0	6.3	0.0	0.0	11.8	0.0	14.5	16.7	0.0	14.6	9.1	100.0	7.1	0.0	14.8	0.0	4.5	50.0	0.0	4.7	9.6	7.1
	7:15 AM	0.0	10.0	25.0	0.0	7.4	0.0	13.2	12.5	0.0	13.1	0.0	7.1	0.0	0.0	2.3	0.0	6.7	0.0	0.0	5.9	8.4	6.4
	7:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	7.3	0.0	0.0	6.7	10.5	0.0	12.5	0.0	8.7	0.0	6.6	0.0	0.0	6.0	6.3	5.8
	7:45 AM	13.3	0.0	0.0	0.0	5.1	0.0	6.8	13.6	0.0	7.5	0.0	4.5	0.0	0.0	1.2	3.1	5.0	0.0	0.0	4.6	5.2	5.7
	8:00 AM	0.0	6.3	50.0	0.0	7.1	0.0	6.9	0.0	0.0	6.2	0.0	0.0	0.0	0.0	0.0	0.0	7.3	40.0	0.0	7.3	5.9	6.2
	8:15 AM	0.0	16.7	33.3	0.0	15.0	66.7	5.0	4.0	0.0	5.7	0.0	5.9	3.6	0.0	3.2	14.3	6.1	0.0	0.0	6.4	6.0	
	8:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	7.1	0.0	0.0	6.0	8.3	20.0	0.0	0.0	6.8	0.0	6.3	16.7	0.0	6.2	6.0	
	8:45 AM	0.0	7.1	0.0	0.0	3.1	100.0	10.0	2.6	0.0	9.0	6.3	0.0	0.0	0.0	1.7	0.0	8.0	33.3	0.0	7.3	7.0	
	9:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Midday Peak Period	10:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	10:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	10:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	10:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	11:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	11:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	11:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	11:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	12:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	12:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	12:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	12:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	1:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	1:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	1:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	1:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PM Peak Period	2:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	2:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	2:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	2:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	3:00 PM	0.0	17.6	75.0	0.0	20.7	0.0	6.3	0.0	0.0	4.6	4.4	0.0	0.0	0.0	1.9	7.7	7.5	0.0	0.0	7.3	6.0	3.4
	3:15 PM	0.0	3.8	0.0	0.0	2.6	0.0	5.6	0.0	0.0	4.0	0.0	5.9	4.1	0.0	2.5	0.0	3.5	0.0	0.0	2.9	3.2	3.2
	3:30 PM	0.0	3.8	0.0	0.0	2.6	0.0	4.5	0.0	0.0	3.3	2.1	0.0	1.5	0.0	1.6	0.0	1.6	0.0	0.0	1.2	2.1	3.0
	3:45 PM	0.0	4.2	11.1	0.0	4.5	0.0	3.1	3.0	0.0	3.0	0.0	6.9	0.0	0.0	1.4	0.0	5.0	0.0	0.0	3.9	3.2	3.1
	4:00 PM	0.0	3.2	0.0	0.0	2.3	0.0	6.6	0.0	0.0	5.0	0.0	4.2	0.0	0.0	0.7	4.0	7.4	12.5	0.0	6.8	4.4	3.1
	4:15 PM	0.0	3.3	16.7	0.0	4.3	0.0	3.6	2.9	0.0	3.4	0.0	4.8	1.4	0.0	1.4	0.0	2.0	0.0	0.0	1.6	2.4	2.4
	4:30 PM	0.0	3.8	0.0	0.0	2.4	0.0	2.7	1.3	0.0	2.2	2.0	0.0	1.4	0.0	1.4	0.0	5.2	0.0	0.0	4.1	2.7	1.9
	4:45 PM	9.1	2.2	0.0	0.0	3.2	0.0	6.3	0.0	0.0	4.5	6.0	3.3	0.0	0.0	2.5	2.0	2.2	0.0	0.0	2.1	3.2	1.6
	5:00 PM	0.0	2.8	0.0	0.0	1.7	0.0	0.9	0.0	0.0	0.7	1.5	4.0	0.0	0.0	1.1	0.0	2.2	0.0	0.0	1.8	1.3	1.0
	5:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.1	0.0	1.0	0.0	3.6	1.2	0.0	1.3	0.0	0.8	0.0	0.0	0.6	0.8	
	5:30 PM	0.0	3.6	0.0	0.0	1.8	0.0	1.3	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	2.1	2.1	0.0	0.0	2.1	1.2	
	5:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	1.0	0.0	7.7	0.0	0.0	0.6	0.0	0.5	0.0	0.0	0.4	0.6	
	6:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Totals		2.4	4.6	7.8	0.0	4.4	18.2	5.5	1.6	0.0	4.8	2.0	5.2	1.2	0.0	2.1	1.5	4.2	4.1	0.0	3.8	3.9	

Peak Hour Heavy Vehicle Percentages Summary

Hourly Time Period	Start Time	From North (↓) Fitchroma Road					From East (←) McKee Road					From South (↑) Fitchroma Road					From West (→) McKee Road					Hourly Heavy Vehicle Percent
		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	
AM	7:15 AM	4.5	3.8	11.1	0.0	5.2	0.0	8.5	6.3	0.0	8.4	2.9	3.0	3.0	0.0	3.0	0.9	6.3	9.5	0.0	5.8	6.4
MD	12:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PM	4:45 PM	1.5	2.1	0.0	0.0	1.6	0.0	2.3	0.4	0.0	1.8	1.8	3.3	0.3	0.0	1.2	1.0	1.8	0.0	0.0	1.6	1.6

Intersection Traffic Volume Report

15-Minute Pedestrian and Bicyclist Data

Count Basics			*Page 11 of 13*
Start Date:	Monday, April 15, 2024	Weekday	Schools in Session
Total Number of Hours Counted: 6		Non-Holiday	No Special Events

Fitchroma Road & McKee Road

Pedestrians and Bicyclists

15-Minute Pedestrian and Bicyclist Data

15-Minute Time Period		Crossing North Approach			Crossing East Approach			Crossing South Approach			Crossing West Approach			15-Min	Hourly
		Fitchroma Road			McKee Road			Fitchroma Road			McKee Road				
Start Time		Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Totals	Sum
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	6:30 AM	0	0	0	0	0	0	1	1	2	0	0	0	2	6
	6:45 AM	0	1	1	0	0	0	0	0	0	0	1	1	2	5
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	7:15 AM	0	0	0	0	0	0	1	0	1	1	0	1	2	3
	7:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	1	1
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 AM	0	0	0	0	0	0	0	0	0	2	0	2	2	
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:00 PM	0	0	0	0	0	0	0	1	1	1	0	1	2	7
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	3:30 PM	0	1	1	0	0	0	0	0	0	1	1	2	3	5
	3:45 PM	0	0	0	0	0	0	2	0	2	0	0	0	2	5
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	6
	4:30 PM	0	0	0	2	0	2	0	1	1	0	0	0	3	7
	4:45 PM	0	0	0	0	0	0	0	2	2	0	0	0	2	14
	5:00 PM	0	0	0	0	0	0	1	0	1	0	0	0	1	13
	5:15 PM	0	0	0	0	1	1	0	0	0	0	0	0	1	
	5:30 PM	2	0	2	0	1	1	3	2	5	2	0	2	10	
	5:45 PM	0	0	0	0	0	0	1	0	1	0	0	0	1	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		**2**	**2**	**4**	**2**	**2**	**4**	**9**	**7**	**16**	**8**	**2**	**10**	**34**	

Special Pedestrians

Pedestrian Type	None	1 or 2	A Few	Several	Many	Unknown
Pre-school Children	x					
Elementry School Age Children	x					
Visually Impaired (white cane/help	x					
Elderly/Disabled (except wheelcha	x					
Wheelchairs/Electric Scooters	x					
Other (None	x					

Intersection Traffic Volume Report

Count Basics	Version 2024.04		Page 1 of 13
Start Date:	Monday, April 15, 2024	Weekday	Schools in Session
Total Number of Hours Counted: 6		Non-Holiday	No Special Events

Base Information, Observed (6) Hour and Estimated (24) Hour Volume Summaries

Major St: **Fitchroma Road**
Minor St: **Kapec Road**
Intersection of: ***Fitchroma Road & Kapec Road***

IX_ID:

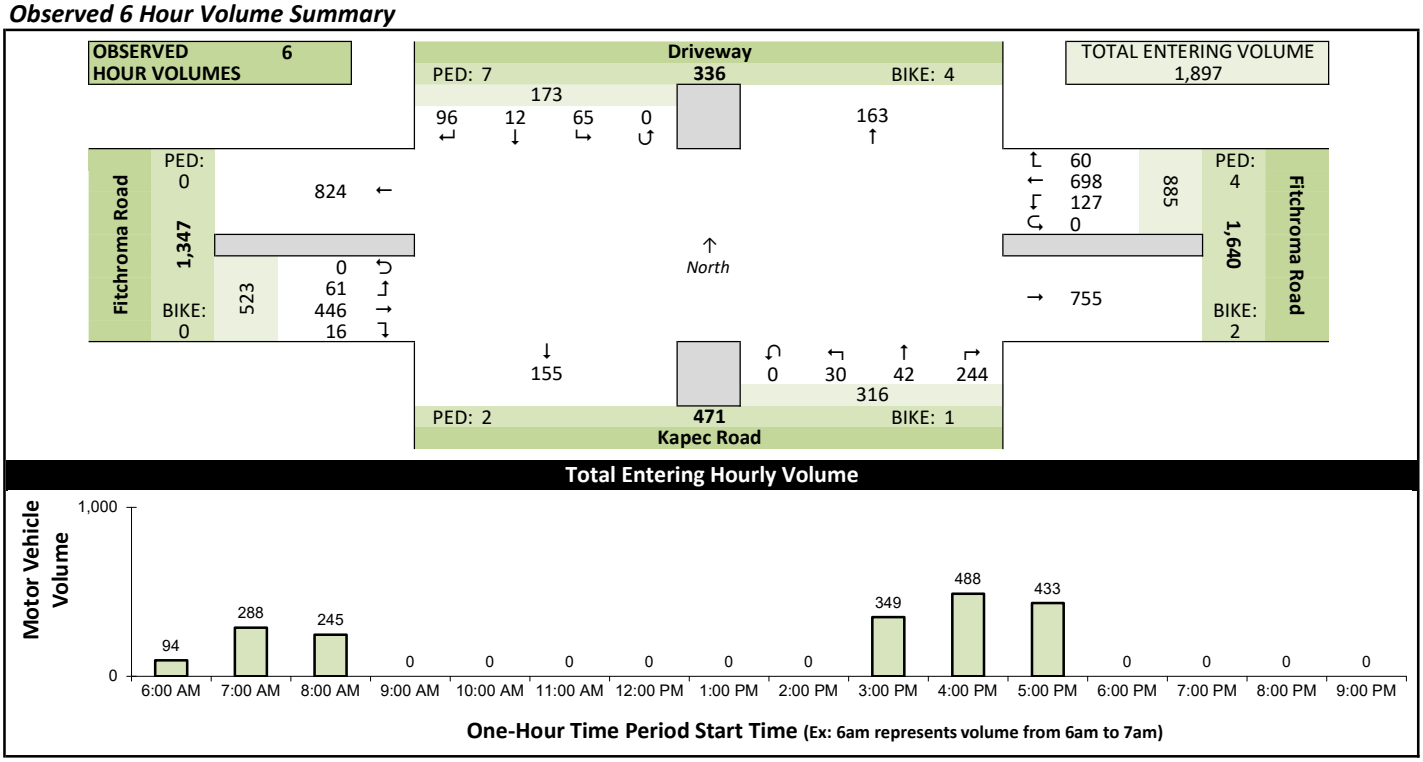
Site Information

Municipality	City of Fitchburg		
County	13 - Dane	WisDOT Region	SW-M
Traffic Control	Partial Stop Control		
Roadway Names		North Direction	↑
North Leg	Driveway		
East Leg	Fitchroma Road		
South Leg	Kapec Road		
West Leg	Fitchroma Road		
Special Considerations			
Schools	In Session		
Holidays	None		
Special Events	None		
Special Pedestrians Observed			
Pre-school children	None		
Elementry school age children	None		
Visually impaired (white cane/helper dog)	None		
Elderly/disabled (except wheelchairs)	None		
Wheelchairs/electric scooters	None		
Other (describe)	None		

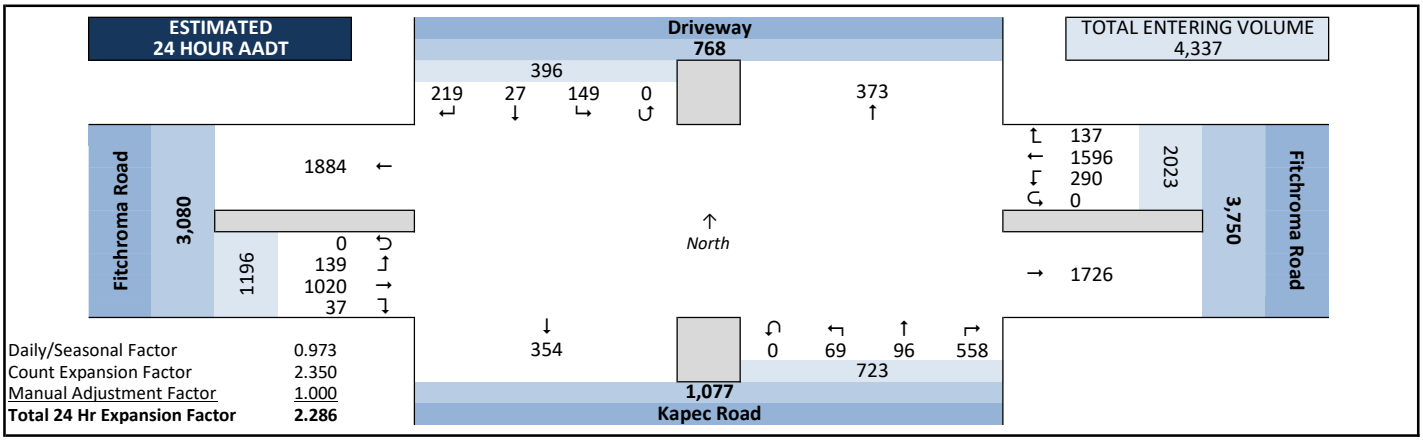
Count Information

Hrs Counted:	06:00 AM-09:00 AM and 03:00 PM-06:00 PM				
1st Day of Count	Monday, April 15, 2024			Weather	
AM Peak Period	Tuesday, April 16, 2024			Clear & Dry	
Midday Peak Period	Tuesday, April 16, 2024			Clear & Dry	
PM Peak Period	Monday, April 15, 2024			Clear & Dry	
Calculated Peak Hours					
AM	7:15-8:15am	MD		PM	4:30-5:30pm
Peak Hours Selected for Analysis					
AM	7:15-8:15am	MD		PM	4:45-5:45pm
Daily/Seasonal Adjustment Group	(2) Urban Arterials & Collectors				
Count Expansion Group	(2) Urban Arterials & Collectors				
Daily/Seasonal Adjustment Factor	0.973	Count Expansion Factor	2.350		
Company Name	TADI, Inc.			Manual Adj.	1.000
Observers	AM Peak Period	Lori Atwell			
	Midday Peak Period	None			
	PM Peak Period	Lori Atwell			
Comments	2021 DOT Daily & Seasonal Factors				

Observed 6 Hour Volume Summary



Estimated 24 Hour AADT



Intersection Traffic Volume Report

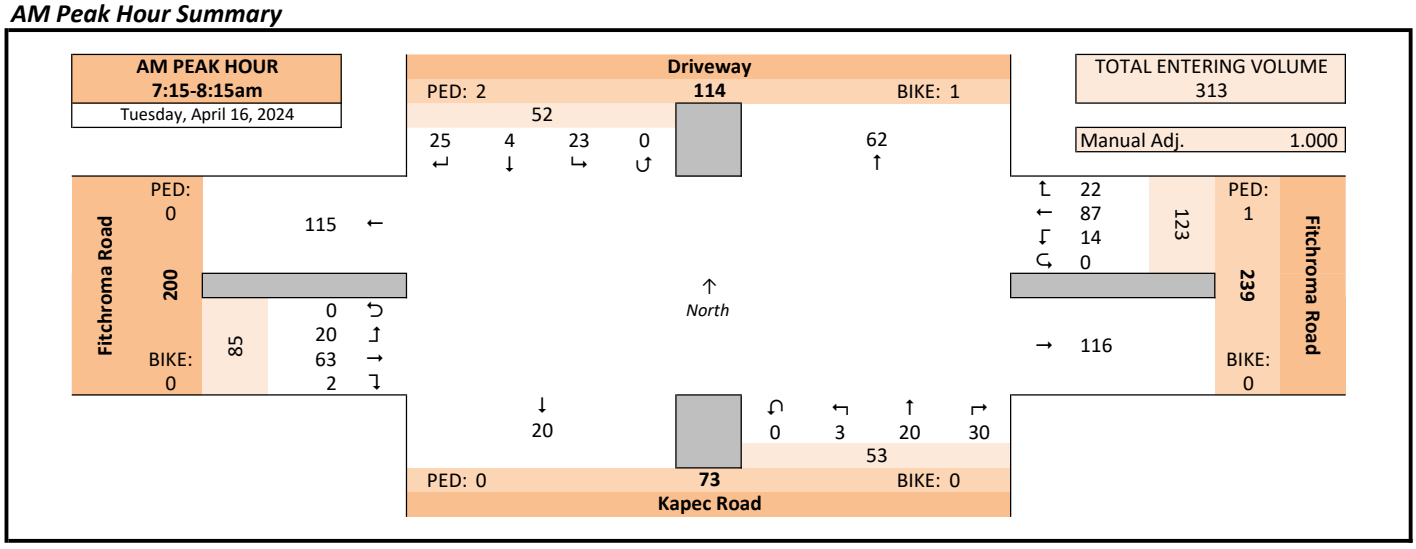
Peak Hour Volume Graphical Summary

Count Basics			*Page 2 of 13*
Start Date:	Monday, April 15, 2024	Weekday	Schools in Session
Total Number of Hours Counted: 6		Non-Holiday	No Special Events

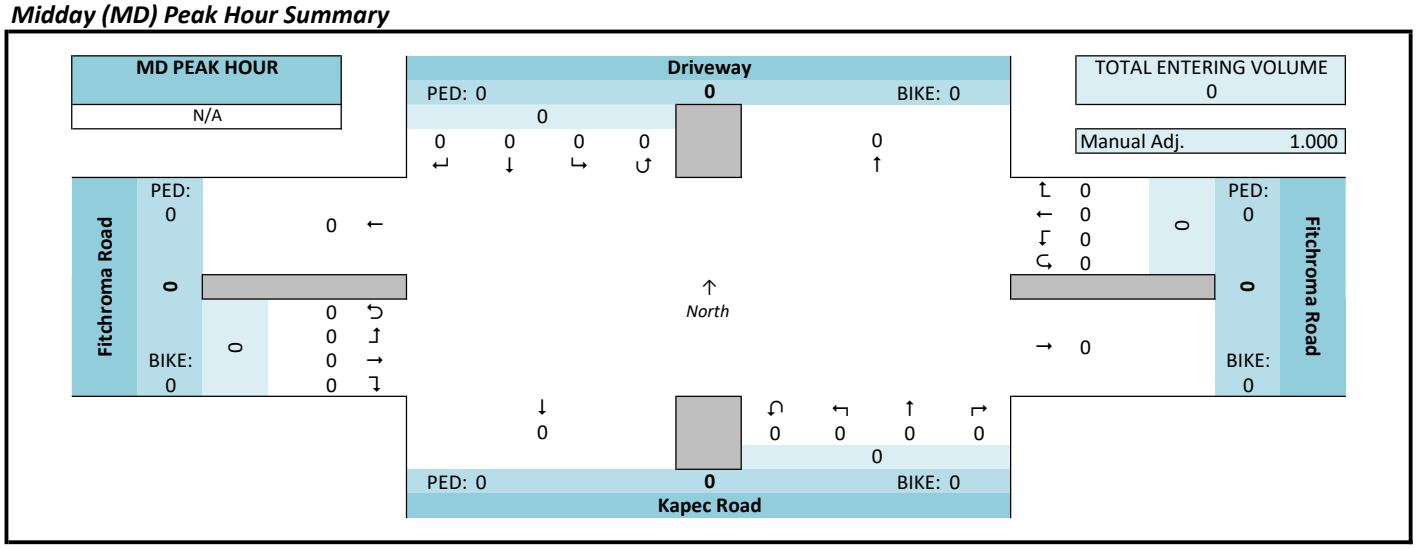
Fitchroma Road & Kapec Road

All Motor Vehicles

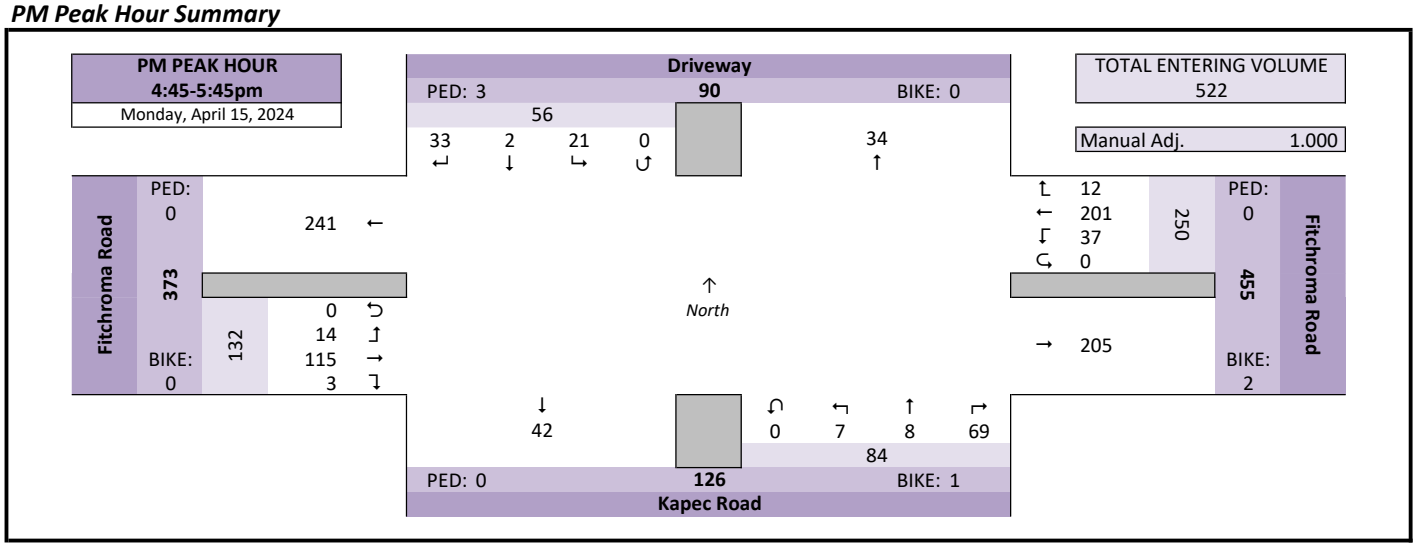
AM Peak Hour Summary



Midday (MD) Peak Hour Summary



PM Peak Hour Summary

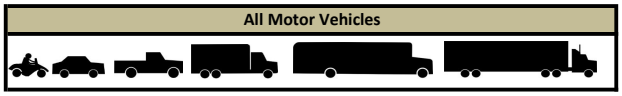


Intersection Traffic Volume Report

Count Basics			Page 3 of 13
Start Date:	Monday, April 15, 2024	Weekday	Schools in Session
Total Number of Hours Counted: 6		Non-Holiday	No Special Events

Peak Hour Volume Summary

Fitchroma Road & Kapec Road



Peak Hour Volumes, Truck Percentages, and PHFs

Tuesday, April 16, 2024		From North					From East					From South					From West					
	AM Peak Hour	Driveway					Fitchroma Road					Kapec Road					Fitchroma Road					
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
AM Peak Hour	7:15 AM	5	1	4	0	10	4	22	2	0	28	6	7	1	0	14	0	14	2	0	16	68
	7:30 AM	6	1	4	0	11	8	13	3	0	24	7	3	0	0	10	0	15	5	0	20	65
	7:45 AM	8	0	8	0	16	5	32	5	0	42	11	6	0	0	17	2	22	6	0	30	105
	8:00 AM	6	2	7	0	15	5	20	4	0	29	6	4	2	0	12	0	12	7	0	19	75
	Peak Hour Volume	25	4	23	0	52	22	87	14	0	123	30	20	3	0	53	2	63	20	0	85	313
	Rounded Hourly Volume	25	5	25	0	55	20	85	15	0	120	30	20	5	0	55	0	65	20	0	85	315
	% Single Unit Trucks	0.0	0.0	0.0	0.0	0.0	0.0	4.6	0.0	0.0	3.3	20.0	0.0	66.7	0.0	15.1	0.0	6.3	0.0	0.0	4.7	5.1
	% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.3
	% Trucks (Total)	0.0	0.0	0.0	0.0	0.0	0.0	4.6	0.0	0.0	3.3	23.3	0.0	66.7	0.0	17.0	0.0	6.3	0.0	0.0	4.7	5.4
	Peak Hour Factor (PHF)	0.78	0.50	0.72	0.00	0.81	0.69	0.68	0.70	0.00	0.73	0.68	0.71	0.37	0.00	0.78	0.25	0.72	0.71	0.00	0.71	0.75

N/A		From North					From East					From South					From West					
	MD Peak Hour	Driveway					Fitchroma Road					Kapec Road					Fitchroma Road					
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
Midday (MD) Peak Hour	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Peak Hour Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Rounded Hourly Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	% Single Unit Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	% Trucks (Total)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Peak Hour Factor (PHF)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Monday, April 15, 2024		From North					From East					From South					From West					
	PM Peak Hour	Driveway					Fitchroma Road					Kapec Road					Fitchroma Road					
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
PM Peak Hour	4:45 PM	11	1	10	0	22	3	51	11	0	65	22	5	1	0	28	1	30	9	0	40	155
	5:00 PM	10	1	5	0	16	7	45	14	0	66	19	1	0	0	20	0	36	3	0	39	141
	5:15 PM	9	0	6	0	15	2	52	7	0	61	22	2	4	0	28	2	32	2	0	36	140
	5:30 PM	3	0	0	0	3	0	53	5	0	58	6	0	2	0	8	0	17	0	0	17	86
	Peak Hour Volume	33	2	21	0	56	12	201	37	0	250	69	8	7	0	84	3	115	14	0	132	522
	Rounded Hourly Volume	35	0	20	0	55	10	200	35	0	245	70	10	5	0	85	5	115	15	0	135	520
	% Single Unit Trucks	3.0	0.0	0.0	0.0	1.8	0.0	1.5	5.4	0.0	2.0	4.3	0.0	0.0	0.0	3.6	0.0	2.6	0.0	0.0	2.3	2.3
	% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	% Trucks (Total)	3.0	0.0	0.0	0.0	1.8	0.0	1.5	5.4	0.0	2.0	4.3	0.0	0.0	0.0	3.6	0.0	2.6	0.0	0.0	2.3	2.3
	Peak Hour Factor (PHF)	0.75	0.50	0.52	0.00	0.64	0.43	0.95	0.66	0.00	0.95	0.78	0.40	0.44	0.00	0.75	0.37	0.80	0.39	0.00	0.82	0.84

Peak Hour Pedestrian and Bicyclist Volumes

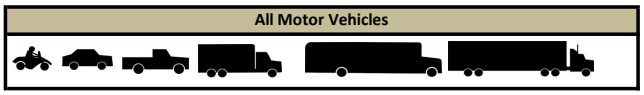
Pedestrians and Bicyclists		Crossing North Approach			Crossing East Approach			Crossing South Approach			Crossing West Approach			Total Ped & Bike Volume
		Driveway			Fitchroma Road			Kapec Road			Fitchroma Road			
	15-Minute Start Time	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	
AM	7:15 AM	0	1	1	1	0	1	0	0	0	0	0	0	2
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	2	0	2	0	0	0	0	0	0	0	0	0	2
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	2	1	3	1	0	1	0	0	0	0	0	0	4
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:45 PM	1	0	1	0	1	1	0	0	0	0	0	0	2
	5:00 PM	1	0	1	0	0	0	0	0	0	0	0	0	1
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	1	0	1	0	1	1	0	1	1	0	0	0	3
	Total	3	0	3	0	2	2	0	1	1	0	0	0	6

Intersection Traffic Volume Report

Count Basics		Page 4 of 13
Start Date: Monday, April 15, 2024	Weekday	Schools in Session
Total Number of Hours Counted: 6	Non-Holiday	No Special Events

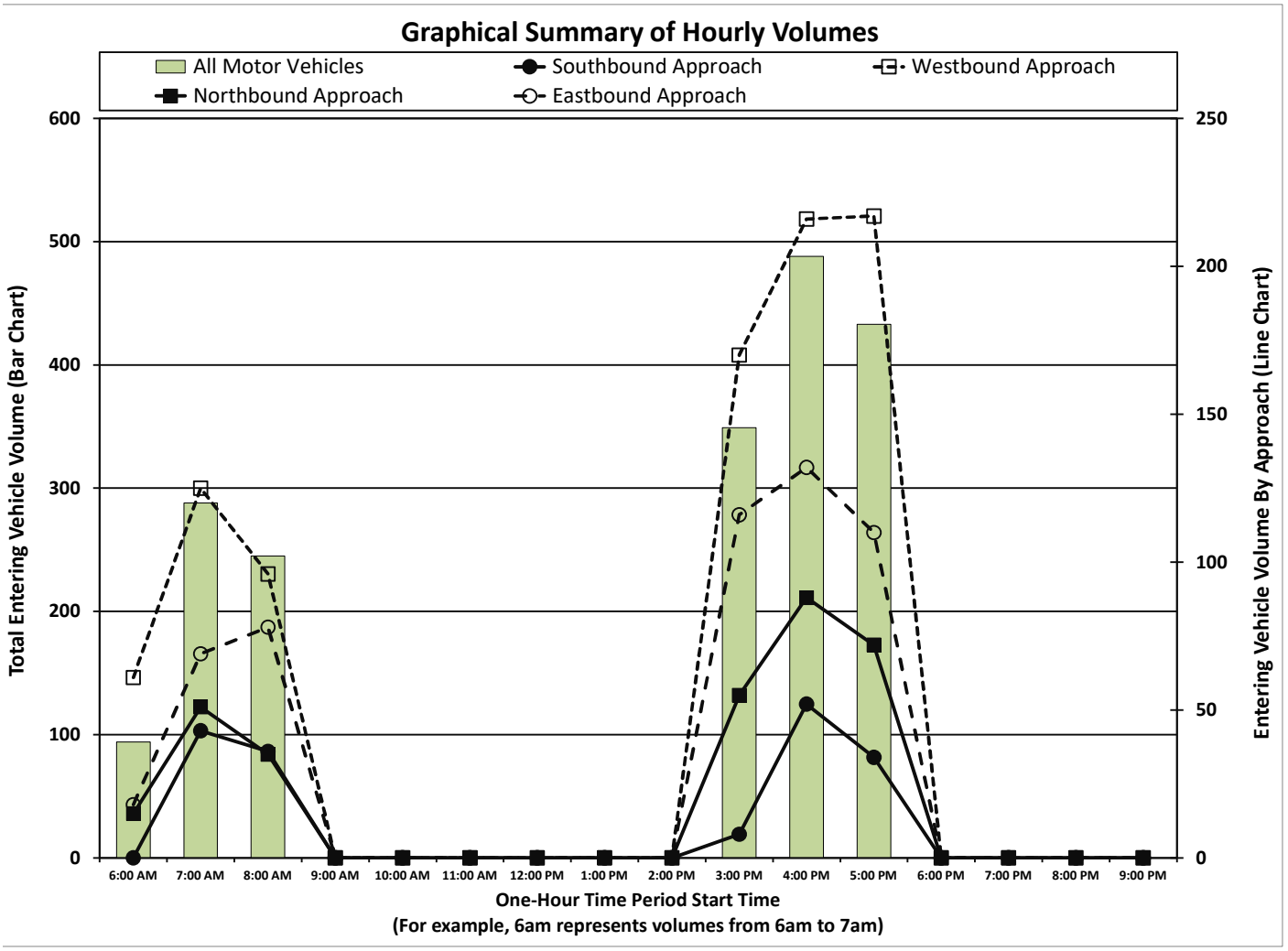
Hourly Volume Summary - Motor Vehicle Data

Fitchroma Road & Kapec Road



One-Hour Motor Vehicle Data

One-Hour Time Period Start Time		From North (↓) Driveway					From East (←) Fitchroma Road					From South (↑) Kapec Road					From West (→) Fitchroma Road					Total Vehicle Volume	Directional Volume Totals E/W	Directional Volume Totals N/S
		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total			
AM	6:00 AM	0	0	0	0	0	1	53	7	0	61	11	1	3	0	15	1	14	3	0	18	94	79	15
	7:00 AM	24	2	17	0	43	21	94	10	0	125	30	19	2	0	51	2	53	14	0	69	288	194	94
	8:00 AM	18	4	14	0	36	7	71	18	0	96	25	4	6	0	35	4	58	16	0	78	245	174	71
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MD	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:00 PM	6	0	2	0	8	1	136	33	0	170	44	3	8	0	55	5	108	3	0	116	349	286	63
	4:00 PM	26	5	21	0	52	21	168	27	0	216	71	12	5	0	88	2	111	19	0	132	488	348	140
	5:00 PM	22	1	11	0	34	9	176	32	0	217	63	3	6	0	72	2	102	6	0	110	433	327	106
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals		96	12	65	0	173	60	698	127	0	885	244	42	30	0	316	16	446	61	0	523	1897	1408	489



Intersection Traffic Volume Report

15-Minute Motor Vehicle Data

Fitchroma Road & Kapec Road

Count Basics		*Page 5 of 13*
Start Date: Monday, April 15, 2024	Weekday	Schools in Session
Total Number of Hours Counted: 6	Non-Holiday	No Special Events

All Motor Vehicles

15-Minute Motor Vehicle Data

15-Minute Time Period		From North (↓) Driveway					From East (←) Fitchroma Road					From South (↑) Kapec Road					From West (→) Fitchroma Road					15-Min	Hourly	
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals	Sum	PHF
AM Peak Period	6:00 AM	0	0	0	0	0	0	9	1	0	10	0	0	0	0	0	0	2	0	0	2	12	94	0.71
	6:15 AM	0	0	0	0	0	0	10	3	0	13	1	0	2	0	3	0	3	0	0	3	19	132	0.66
	6:30 AM	0	0	0	0	0	0	16	1	0	17	6	0	0	0	6	1	5	1	0	7	30	181	0.67
	6:45 AM	0	0	0	0	0	1	18	2	0	21	4	1	1	0	6	0	4	2	0	6	33	216	0.79
	7:00 AM	5	0	1	0	6	4	27	0	0	31	6	3	1	0	10	0	2	1	0	3	50	288	0.69
	7:15 AM	5	1	4	0	10	4	22	2	0	28	6	7	1	0	14	0	14	2	0	16	68	313	0.75
	7:30 AM	6	1	4	0	11	8	13	3	0	24	7	3	0	0	10	0	15	5	0	20	65	304	0.72
	7:45 AM	8	0	8	0	16	5	32	5	0	42	11	6	0	0	17	2	22	6	0	30	105	295	0.70
	8:00 AM	6	2	7	0	15	5	20	4	0	29	6	4	2	0	12	0	12	7	0	19	75	245	0.82
	8:15 AM	6	2	5	0	13	1	10	2	0	13	6	0	2	0	8	1	19	5	0	25	59		
	8:30 AM	6	0	2	0	8	0	14	5	0	19	7	0	1	0	8	3	15	3	0	21	56		
	8:45 AM	0	0	0	0	0	1	27	7	0	35	6	0	1	0	7	0	12	1	0	13	55		
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	3:00 PM	0	0	1	0	1	0	24	9	0	33	12	0	4	0	16	2	17	1	0	20	70	349	0.73
	3:15 PM	2	0	0	0	2	0	33	5	0	38	4	1	2	0	7	1	25	1	0	27	74	392	0.82
	3:30 PM	4	0	0	0	4	0	33	8	0	41	13	1	1	0	15	1	24	1	0	26	86	434	0.91
	3:45 PM	0	0	1	0	1	1	46	11	0	58	15	1	1	0	17	1	42	0	0	43	119	452	0.95
	4:00 PM	4	0	2	0	6	5	42	6	0	53	19	2	1	0	22	0	29	3	0	32	113	488	0.79
	4:15 PM	3	1	7	0	11	5	40	3	0	48	22	1	1	0	24	1	28	4	0	33	116	516	0.83
	4:30 PM	8	3	2	0	13	8	35	7	0	50	8	4	2	0	14	0	24	3	0	27	104	540	0.87
	4:45 PM	11	1	10	0	22	3	51	11	0	65	22	5	1	0	28	1	30	9	0	40	155	522	0.84
	5:00 PM	10	1	5	0	16	7	45	14	0	66	19	1	0	0	20	0	36	3	0	39	141	433	0.77
	5:15 PM	9	0	6	0	15	2	52	7	0	61	22	2	4	0	28	2	32	2	0	36	140		
	5:30 PM	3	0	0	0	3	0	53	5	0	58	6	0	2	0	8	0	17	0	0	17	86		
	5:45 PM	0	0	0	0	0	0	26	6	0	32	16	0	0	0	16	0	17	1	0	18	66		
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Totals		96	12	65	0	173	60	698	127	0	885	244	42	30	0	316	16	446	61	0	523	1897		

Peak Hour All Vehicle Volume Summary

Hourly Time Period		From North (↓) Driveway					From East (←) Fitchroma Road					From South (↑) Kapec Road					From West (→) Fitchroma Road					Total Hourly	
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Volume	PHF
AM	7:15 AM	25	4	23	0	52	22	87	14	0	123	30	20	3	0	53	2	63	20	0	85	313	0.75
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM	4:45 PM	33	2	21	0	56	12	201	37	0	250	69	8	7	0	84	3	115	14	0	132	522	0.84

Intersection Traffic Volume Report

Count Basics			*Page 6 of 13*
Start Date:	Monday, April 15, 2024	Weekday	Schools in Session
Total Number of Hours Counted: 6		Non-Holiday	No Special Events

15-Minute Automobile Data

Fitchroma Road & Kapec Road

Automobiles (Cars, Light Trucks, & Motorcycles)

15-Minute Automobile Data

15-Minute Time Period		From North (↓) Driveway					From East (←) Fitchroma Road					From South (↑) Kapec Road					From West (→) Fitchroma Road					15-Min	Hourly
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals	Sum
AM Peak Period	6:00 AM	0	0	0	0	0	0	9	1	0	10	0	0	0	0	0	0	1	0	0	1	11	85
	6:15 AM	0	0	0	0	0	0	9	3	0	12	1	0	1	0	2	0	3	0	0	3	17	118
	6:30 AM	0	0	0	0	0	0	16	1	0	17	4	0	0	0	4	1	4	1	0	6	27	163
	6:45 AM	0	0	0	0	0	1	16	2	0	19	4	1	1	0	6	0	3	2	0	5	30	199
	7:00 AM	5	0	1	0	6	4	24	0	0	28	5	3	0	0	8	0	1	1	0	2	44	268
	7:15 AM	5	1	4	0	10	4	21	2	0	27	4	7	0	0	11	0	12	2	0	14	62	296
	7:30 AM	6	1	4	0	11	8	13	3	0	24	5	3	0	0	8	0	15	5	0	20	63	288
	7:45 AM	8	0	8	0	16	5	29	5	0	39	9	6	0	0	15	2	21	6	0	29	99	276
	8:00 AM	6	2	7	0	15	5	20	4	0	29	5	4	1	0	10	0	11	7	0	18	72	230
	8:15 AM	6	2	5	0	13	1	9	2	0	12	5	0	0	0	5	0	19	5	0	24	54	
	8:30 AM	6	0	2	0	8	0	14	5	0	19	7	0	1	0	8	2	11	3	0	16	51	
	8:45 AM	0	0	0	0	0	1	26	6	0	33	6	0	1	0	7	0	12	1	0	13	53	
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:00 PM	0	0	1	0	1	0	21	9	0	30	11	0	3	0	14	1	15	1	0	17	62	335
	3:15 PM	2	0	0	0	2	0	31	5	0	36	4	1	2	0	7	1	24	1	0	26	71	381
	3:30 PM	4	0	0	0	4	0	33	8	0	41	13	1	1	0	15	1	24	1	0	26	86	423
	3:45 PM	0	0	1	0	1	1	45	11	0	57	15	1	0	0	16	1	41	0	0	42	116	438
	4:00 PM	4	0	2	0	6	5	40	6	0	51	18	2	1	0	21	0	27	3	0	30	108	471
	4:15 PM	3	1	7	0	11	5	38	2	0	45	22	1	1	0	24	1	28	4	0	33	113	502
	4:30 PM	8	3	2	0	13	8	35	6	0	49	7	4	2	0	13	0	23	3	0	26	101	527
	4:45 PM	10	1	10	0	21	3	49	11	0	63	20	5	1	0	26	1	29	9	0	39	149	510
	5:00 PM	10	1	5	0	16	7	45	13	0	65	19	1	0	0	20	0	35	3	0	38	139	425
	5:15 PM	9	0	6	0	15	2	52	6	0	60	22	2	4	0	28	2	31	2	0	35	138	
	5:30 PM	3	0	0	0	3	0	52	5	0	57	5	0	2	0	7	0	17	0	0	17	84	
	5:45 PM	0	0	0	0	0	0	25	6	0	31	16	0	0	0	16	0	16	1	0	17	64	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		95	12	65	0	172	60	672	122	0	854	227	42	22	0	291	13	423	61	0	497	1814	

Peak Hour Automobile Volume Summary

Hourly Time Period		From North (↓) Driveway					From East (←) Fitchroma Road					From South (↑) Kapec Road					From West (→) Fitchroma Road					Total Hourly
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Volume
AM	7:15 AM	25	4	23	0	52	22	83	14	0	119	23	20	1	0	44	2	59	20	0	81	296
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:45 PM	32	2	21	0	55	12	198	35	0	245	66	8	7	0	81	3	112	14	0	129	510

Intersection Traffic Volume Report

15-Minute Single Unit (SU) Truck & Bus Data

Fitchroma Road & Kapec Road

Count Basics		*Page 7 of 13*
Start Date: Monday, April 15, 2024	Weekday	Schools in Session
Total Number of Hours Counted: 6	Non-Holiday	No Special Events

Single Unit (SU) Trucks & Buses

15-Minute Single Unit (SU) Truck & Bus Data

15-Minute Time Period		From North (↓) Driveway					From East (←) Fitchroma Road					From South (↑) Kapec Road					From West (→) Fitchroma Road					15-Min	Hourly
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals	Sum
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	9
	6:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	2	14
	6:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	1	0	0	1	3	17
	6:45 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3	16
	7:00 AM	0	0	0	0	0	0	3	0	0	3	1	0	1	0	2	0	1	0	0	1	6	19
	7:15 AM	0	0	0	0	0	0	1	0	0	1	1	0	1	0	2	0	2	0	0	2	5	16
	7:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	2	16
	7:45 AM	0	0	0	0	0	0	3	0	0	3	2	0	0	0	2	0	1	0	0	1	6	19
	8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	1	0	0	1	3	15
	8:15 AM	0	0	0	0	0	0	1	0	0	1	1	0	2	0	3	1	0	0	0	1	5	
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	0	0	5	5	
	8:45 AM	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	2	
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:00 PM	0	0	0	0	0	0	2	0	0	2	1	0	1	0	2	1	2	0	0	3	7	13
	3:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3	11
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
	3:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	1	0	0	1	3	14
	4:00 PM	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	0	2	0	0	2	5	17
	4:15 PM	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0	3	14
	4:30 PM	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	1	0	0	1	3	13
	4:45 PM	1	0	0	0	1	0	2	0	0	2	2	0	0	0	2	0	1	0	0	1	6	12
	5:00 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	2	8
	5:15 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	2	
	5:30 PM	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	2	
	5:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		1	0	0	0	1	0	25	5	0	30	16	0	8	0	24	3	23	0	0	26	81	

Peak Hour Single Unit (SU) Truck & Buses Volume Summary

Hourly Time Period		From North (↓) Driveway					From East (←) Fitchroma Road					From South (↑) Kapec Road					From West (→) Fitchroma Road					Total Hourly
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Volume
AM	7:15 AM	0	0	0	0	0	0	4	0	0	4	6	0	2	0	8	0	4	0	0	4	16
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:45 PM	1	0	0	0	1	0	3	2	0	5	3	0	0	0	3	0	3	0	0	3	12

Intersection Traffic Volume Report

15-Minute Semi-Truck Data

Count Basics		*Page 8 of 13*
Start Date: Monday, April 15, 2024	Weekday	Schools in Session
Total Number of Hours Counted: 6	Non-Holiday	No Special Events

Fitchroma Road & Kapec Road

Semi-Trucks

15-Minute Semi-Truck Data

15-Minute Time Period		From North (↓) Driveway					From East (←) Fitchroma Road					From South (↑) Kapec Road					From West (→) Fitchroma Road					15-Min	Hourly
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals	Sum
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	1
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	2	

Peak Hour Semi-Truck Volume Summary

Hourly Time Period		From North (↓) Driveway					From East (←) Fitchroma Road					From South (↑) Kapec Road					From West (→) Fitchroma Road					Total Hourly
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Volume
AM	7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Intersection Traffic Volume Report

15-Minute Heavy Vehicle Data

Count Basics			*Page 9 of 13*
Start Date:	Monday, April 15, 2024	Weekday	Schools in Session
Total Number of Hours Counted: 6		Non-Holiday	No Special Events

Fitchroma Road & Kapec Road

Heavy Vehicles (Single-Unit Trucks, Buses & Semi-Trucks)

15-Minute Heavy Vehicle Data

15-Minute Time Period		From North (↓) Driveway					From East (←) Fitchroma Road					From South (↑) Kapec Road					From West (→) Fitchroma Road					15-Min	Hourly
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals	Sum
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	9
	6:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	2	14
	6:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	1	0	0	1	3	18
	6:45 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3	17
	7:00 AM	0	0	0	0	0	0	3	0	0	3	1	0	1	0	2	0	1	0	0	1	6	20
	7:15 AM	0	0	0	0	0	0	1	0	0	1	2	0	1	0	3	0	2	0	0	2	6	17
	7:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	2	16
	7:45 AM	0	0	0	0	0	0	3	0	0	3	2	0	0	0	2	0	1	0	0	1	6	19
	8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	1	0	0	1	3	15
	8:15 AM	0	0	0	0	0	0	1	0	0	1	1	0	2	0	3	1	0	0	0	1	5	
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	0	0	5	5	
	8:45 AM	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	2	
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:00 PM	0	0	0	0	0	0	3	0	0	3	1	0	1	0	2	1	2	0	0	3	8	14
	3:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3	11
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
	3:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	1	0	0	1	3	14
	4:00 PM	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	0	2	0	0	2	5	17
	4:15 PM	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0	3	14
	4:30 PM	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	1	0	0	1	3	13
	4:45 PM	1	0	0	0	1	0	2	0	0	2	2	0	0	0	2	0	1	0	0	1	6	12
	5:00 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	2	8
	5:15 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	2	
	5:30 PM	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	2	
	5:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		1	0	0	0	1	0	26	5	0	31	17	0	8	0	25	3	23	0	0	26	83	

Peak Hour Heavy Vehicle Volume Summary

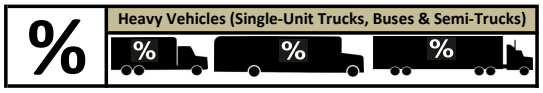
Hourly Time Period		From North (↓) Driveway					From East (←) Fitchroma Road					From South (↑) Kapec Road					From West (→) Fitchroma Road					Total Hourly	
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Volume	
AM	7:15 AM	0	0	0	0	0	0	4	0	0	4	7	0	2	0	9	0	4	0	0	4	17	
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM	4:45 PM	1	0	0	0	1	0	3	2	0	5	3	0	0	0	3	0	3	0	0	3	12	

Intersection Traffic Volume Report

15-Minute Heavy Vehicle Percentages

Fitchroma Road & Kapec Road

Count Basics		*Page 10 of 13*
Start Date: Monday, April 15, 2024	Weekday	Schools in Session
Total Number of Hours Counted: 6	Non-Holiday	No Special Events



15-Minute Heavy Vehicle Percentages

	15-Minute Time Period Start Time	From North (↓) Driveway					From East (←) Fitchroma Road					From South (↑) Kapec Road					From West (→) Fitchroma Road					Total Heavy Vehicle Percent	Hourly Heavy Vehicle Percent
		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total		
AM Peak Period	6:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	50.0	8.3	9.6
	6:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	7.7	0.0	0.0	50.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	10.5	10.6
	6:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	0.0	33.3	0.0	20.0	0.0	0.0	14.3	10.0	9.9
	6:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	11.1	0.0	0.0	9.5	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	16.7	9.1	7.9
	7:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	11.1	0.0	0.0	9.7	16.7	0.0	100.0	0.0	20.0	0.0	50.0	0.0	0.0	33.3	12.0	6.9
	7:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.0	3.6	33.3	0.0	100.0	0.0	21.4	0.0	14.3	0.0	0.0	12.5	8.8	5.4
	7:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.6	0.0	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	3.1	5.3
	7:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	9.4	0.0	0.0	7.1	18.2	0.0	0.0	0.0	11.8	0.0	4.5	0.0	0.0	3.3	5.7	6.4
	8:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.7	0.0	50.0	0.0	16.7	0.0	8.3	0.0	0.0	5.3	4.0	6.1
	8:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	7.7	16.7	0.0	100.0	0.0	37.5	100.0	0.0	0.0	0.0	4.0	8.5	
	8:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	26.7	0.0	0.0	23.8	8.9	
	8:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	3.7	14.3	0.0	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	
	9:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Midday Peak Period	10:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	10:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	10:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	10:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	11:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	11:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	11:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	11:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	12:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	12:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	12:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	12:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	1:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	1:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	1:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	1:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PM Peak Period	2:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	2:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	2:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	2:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	3:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	12.5	0.0	0.0	9.1	8.3	0.0	25.0	0.0	12.5	50.0	11.8	0.0	0.0	15.0	11.4	4.0
	3:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	6.1	0.0	0.0	5.3	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	3.7	4.1	2.8
	3:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5
	3:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	1.7	0.0	0.0	100.0	0.0	5.9	0.0	2.4	0.0	0.0	2.3	2.5	3.1
	4:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.0	3.8	5.3	0.0	0.0	0.0	4.5	0.0	6.9	0.0	0.0	6.3	4.4	3.5
	4:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	5.0	33.3	0.0	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	2.7
	4:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3	0.0	2.0	12.5	0.0	0.0	0.0	7.1	0.0	4.2	0.0	0.0	3.7	2.9	2.4
	4:45 PM	9.1	0.0	0.0	0.0	4.5	0.0	3.9	0.0	0.0	3.1	9.1	0.0	0.0	0.0	7.1	0.0	3.3	0.0	0.0	2.5	3.9	2.3
	5:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0	2.6	1.4	1.8
	5:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0	2.8	1.4	
	5:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	1.7	16.7	0.0	0.0	0.0	12.5	0.0	0.0	0.0	0.0	0.0	2.3	
	5:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	5.9	0.0	0.0	5.6	3.0	
	6:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Totals		1.0	0.0	0.0	0.0	0.6	0.0	3.7	3.9	0.0	3.5	7.0	0.0	26.7	0.0	7.9	18.8	5.2	0.0	0.0	5.0	4.4	

Peak Hour Heavy Vehicle Percentages Summary

	Hourly Time Period Start Time	From North (↓) Driveway					From East (←) Fitchroma Road					From South (↑) Kapec Road					From West (→) Fitchroma Road					Hourly Heavy Vehicle Percent
		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	
AM	7:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	4.6	0.0	0.0	3.3	23.3	0.0	66.7	0.0	17.0	0.0	6.3	0.0	0.0	4.7	5.4
MD	12:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PM	4:45 PM	3.0	0.0	0.0	0.0	1.8	0.0	1.5	5.4	0.0	2.0	4.3	0.0	0.0	0.0	3.6	0.0	2.6	0.0	0.0	2.3	2.3

Intersection Traffic Volume Report

15-Minute Pedestrian and Bicyclist Data

Count Basics			*Page 11 of 13*
Start Date:	Monday, April 15, 2024	Weekday	Schools in Session
Total Number of Hours Counted: 6		Non-Holiday	No Special Events

Fitchroma Road & Kapec Road

Pedestrians and Bicyclists

15-Minute Pedestrian and Bicyclist Data

	15-Minute Time Period	Crossing North Approach			Crossing East Approach			Crossing South Approach			Crossing West Approach				
		Driveway			Fitchroma Road			Kapec Road			Fitchroma Road			15-Min	Hourly
	Start Time	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Totals	Sum
AM Peak Period	6:00 AM	0	1	1	1	0	1	0	0	0	0	0	0	2	3
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	6:45 AM	0	1	1	0	0	0	0	0	0	0	0	0	1	3
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	7:15 AM	0	1	1	1	0	1	0	0	0	0	0	0	2	4
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	7:45 AM	2	0	2	0	0	0	0	0	0	0	0	0	2	2
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 AM	1	0	1	0	0	0	0	0	0	0	0	0	1	
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	3:30 PM	1	1	2	1	0	1	2	0	2	0	0	0	5	5
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	4:30 PM	0	0	0	1	0	1	0	0	0	0	0	0	1	4
	4:45 PM	1	0	1	0	1	1	0	0	0	0	0	0	2	6
	5:00 PM	1	0	1	0	0	0	0	0	0	0	0	0	1	4
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:30 PM	1	0	1	0	1	1	0	1	1	0	0	0	3	
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		**7**	**4**	**11**	**4**	**2**	**6**	**2**	**1**	**3**	**0**	**0**	**0**	**20**	

Special Pedestrians

Pedestrian Type	None	1 or 2	A Few	Several	Many	Unknown
Pre-school Children	x					
Elementry School Age Children	x					
Visually Impaired (white cane/help	x					
Elderly/Disabled (except wheelcha	x					
Wheelchairs/Electric Scooters	x					
Other (None	x					

Date: April 26, 2024

BASE SATURATION FLOW RATE CALCULATIONS

Intersection Name
McKee Rd & Fitchrona Rd

Urbanized Area/Cluster Population
401,700

Exit Ramp:	No
Speed Limit:	25

Sat. Flow Rate (pc/h/ln)				
1900		1785 *		1785 *

**Consider using 1900 pc/h/ln*

N

Exit Ramp:	Sat. Flow (pc/h/ln)		# of Lanes	Lane Type	Traffic Signal	Lane Type	# of Lanes	Sat. Flow (pc/h/ln)	Exit Ramp:
				# of Lanes					
				Lane Type					
			1	L		R	1	1900	
No	1897 *			L-T		T-R			No
Speed Limit:			2	T		T	2	1909	Speed Limit:
	1897 *			T-R		L-T			
40			1	R		L	2	1909	40
	1900								

**Consider using 1900 pc/h/ln*

L	L-T	T	T-R	R
2		1		1
Lane Type				
# of Lanes				

**Consider using 1900 pc/h/ln*

Sat. Flow Rate (pc/h/ln)				
1858 *		1858 *		1900

Speed Limit:	35
Exit Ramp:	No

Bureau of Traffic Operations

Last Updated: **4/7/2022**

City of Madison

ECONOLITE CONTROL PRODUCTS, INC.

Solutions that Move the World™

McKee - Fitchrona - McKee Rd @ Fitchrona Rd - Econolite Type - Cobalt

Controller Timing Plan (MM) 2-1
Plan 1 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	E-L	W	N-L	S	W-L	E	S-L	N	N	N	N	N	N	N	N	N
Min Green	5	15	5	10	5	15	5	10	0	0	0	0	0	0	0	0
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	7	0	7	0	7	0	7	0	0	0	0	0	0	0	0
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	24	0	27	0	24	0	27	0	0	0	0	0	0	0	0
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	3.0	5.0	3.0	3.0	3.0	5.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	15	50	15	35	25	45	15	35	0	0	0	0	0	0	0	0
Max2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.5	4.0	3.5	3.5	3.5	4.0	3.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Clear	2.5	2.5	2.5	3.0	3.0	2.5	2.5	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix B
Year 2024 Existing Traffic
Peak Hour Analysis Outputs

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	65	1	15	85	20	5	20	30	25	5	25
Future Vol, veh/h	20	65	1	15	85	20	5	20	30	25	5	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	120	200	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	75	75	75	75	75	75	75	75	75
Heavy Vehicles, %	5	5	5	3	3	3	17	17	17	1	1	1
Mvmt Flow	27	87	1	20	113	27	7	27	40	33	7	33

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	140	0	0	88	0	0	328	321	87	342	309	127
Stage 1	-	-	-	-	-	-	141	141	-	167	167	-
Stage 2	-	-	-	-	-	-	187	180	-	175	142	-
Critical Hdwy	4.15	-	-	4.13	-	-	7.27	6.67	6.37	7.11	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.27	5.67	-	6.11	5.51	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.27	5.67	-	6.11	5.51	-
Follow-up Hdwy	2.245	-	-	2.227	-	-	3.653	4.153	3.453	3.509	4.009	3.309
Pot Cap-1 Maneuver	1425	-	-	1501	-	-	597	572	932	614	607	926
Stage 1	-	-	-	-	-	-	827	752	-	837	762	-
Stage 2	-	-	-	-	-	-	781	723	-	829	781	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1425	-	-	1501	-	-	556	553	932	552	587	926
Mov Cap-2 Maneuver	-	-	-	-	-	-	556	553	-	552	587	-
Stage 1	-	-	-	-	-	-	810	737	-	820	752	-
Stage 2	-	-	-	-	-	-	736	714	-	749	765	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.8	0.9	10.6	10.9
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	711	1425	-	-	1501	-	-	681
HCM Lane V/C Ratio	0.103	0.019	-	-	0.013	-	-	0.108
HCM Control Delay (s)	10.6	7.6	0	-	7.4	-	-	10.9
HCM Lane LOS	B	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0	-	-	0.4

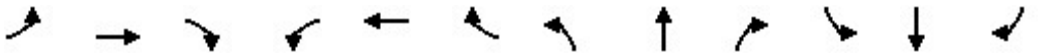
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	950	110	65	750	2	135	65	70	20	55	45
Future Volume (vph)	20	950	110	65	750	2	135	65	70	20	55	45
Satd. Flow (prot)	1703	3406	1524	3259	3360	1495	3400	1845	1568	1719	3438	1538
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1703	3406	1524	3259	3360	1495	3400	1845	1568	1719	3438	1538
Satd. Flow (RTOR)												
Lane Group Flow (vph)	22	1067	77	73	843	1	152	73	49	22	62	31
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	1	6		5	2		3	8	5	7	4	1
Permitted Phases			6			2			8			4
Total Split (s)	21.0	51.5	51.5	31.5	62.0	62.0	21.0	41.5	31.5	21.0	41.5	21.0
Total Lost Time (s)	6.0	6.5	6.5	6.5	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.0
Act Effct Green (s)	7.1	44.3	44.3	7.7	47.6	47.6	10.7	17.4	31.9	7.1	10.3	19.3
Actuated g/C Ratio	0.08	0.49	0.49	0.08	0.52	0.52	0.12	0.19	0.35	0.08	0.11	0.21
v/c Ratio	0.17	0.64	0.10	0.26	0.48	0.00	0.38	0.21	0.09	0.17	0.16	0.10
Control Delay	46.4	22.2	16.7	45.2	17.3	15.0	43.4	37.3	24.4	46.2	42.1	30.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.4	22.2	16.7	45.2	17.3	15.0	43.4	37.3	24.4	46.2	42.1	30.2
LOS	D	C	B	D	B	B	D	D	C	D	D	C
Approach Delay		22.3			19.5			38.4			39.7	
Approach LOS		C			B			D			D	
Queue Length 50th (ft)	13	265	26	22	186	0	45	34	18	13	18	15
Queue Length 95th (ft)	39	364	58	45	262	4	78	86	52	39	40	40
Internal Link Dist (ft)		660			1905			794			455	
Turn Bay Length (ft)	160		120	370			220		150	360		360
Base Capacity (vph)	289	1736	777	923	2113	940	578	731	860	292	1363	468
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.61	0.10	0.08	0.40	0.00	0.26	0.10	0.06	0.08	0.05	0.07

Intersection Summary		
Cycle Length: 145.5		
Actuated Cycle Length: 91		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.64		
Intersection Signal Delay: 23.8	Intersection LOS: C	
Intersection Capacity Utilization 52.1%	ICU Level of Service A	
Analysis Period (min) 15		

Splits and Phases: 500: Fitchrona Rd & McKee Rd

HCM 6th Signalized Intersection Summary
500: Fitchrona Rd & McKee Rd

05/01/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	950	110	65	750	2	135	65	70	20	55	45
Future Volume (veh/h)	20	950	110	65	750	2	135	65	70	20	55	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1791	1791	1781	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	22	1067	77	73	843	1	152	73	49	22	62	31
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	6	6	6	8	8	8	3	3	3	5	5	5
Cap, veh/h	51	1377	614	204	1494	663	258	326	374	51	450	246
Arrive On Green	0.03	0.40	0.40	0.06	0.44	0.44	0.08	0.18	0.18	0.03	0.13	0.13
Sat Flow, veh/h	1725	3441	1535	3309	3403	1510	3428	1856	1572	1739	3469	1547
Grp Volume(v), veh/h	22	1067	77	73	843	1	152	73	49	22	62	31
Grp Sat Flow(s),veh/h/ln	1725	1721	1535	1654	1701	1510	1714	1856	1572	1739	1735	1547
Q Serve(g_s), s	1.0	20.6	2.4	1.6	14.1	0.0	3.3	2.6	1.9	1.0	1.2	1.3
Cycle Q Clear(g_c), s	1.0	20.6	2.4	1.6	14.1	0.0	3.3	2.6	1.9	1.0	1.2	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	51	1377	614	204	1494	663	258	326	374	51	450	246
V/C Ratio(X)	0.44	0.78	0.13	0.36	0.56	0.00	0.59	0.22	0.13	0.43	0.14	0.13
Avail Cap(c_a), veh/h	338	2023	902	1081	2467	1094	672	848	816	341	1586	753
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.5	20.0	14.5	34.5	16.0	12.1	34.2	27.1	23.0	36.5	29.5	27.6
Incr Delay (d2), s/veh	5.8	1.2	0.1	1.1	0.3	0.0	2.1	0.3	0.2	5.7	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	7.5	0.8	0.6	4.9	0.0	1.4	1.1	0.7	0.5	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.3	21.1	14.6	35.5	16.3	12.1	36.4	27.4	23.1	42.2	29.7	27.8
LnGrp LOS	D	C	B	D	B	B	D	C	C	D	C	C
Approach Vol, veh/h		1166			917			274			115	
Approach Delay, s/veh		21.1			17.9			31.6			31.6	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.2	40.1	11.8	16.4	11.2	37.1	8.2	20.0
Change Period (Y+Rc), s	6.0	6.5	6.0	6.5	6.5	6.5	6.0	6.5
Max Green Setting (Gmax), s	15.0	55.5	15.0	35.0	25.0	45.0	15.0	35.0
Max Q Clear Time (g_c+I1), s	3.0	16.1	5.3	3.3	3.6	22.6	3.0	4.6
Green Ext Time (p_c), s	0.0	6.6	0.3	0.4	0.2	8.0	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	21.6
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	115	5	35	200	10	5	10	70	20	1	35
Future Vol, veh/h	20	115	5	35	200	10	5	10	70	20	1	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	120	200	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2	4	4	4	2	2	2
Mvmt Flow	24	137	6	42	238	12	6	12	83	24	1	42

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	250	0	0	143	0	0	535	519	137	564	519	244
Stage 1	-	-	-	-	-	-	185	185	-	328	328	-
Stage 2	-	-	-	-	-	-	350	334	-	236	191	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.14	6.54	6.24	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.14	5.54	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.14	5.54	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.536	4.036	3.336	3.518	4.018	3.318
Pot Cap-1 Maneuver	1316	-	-	1440	-	-	453	458	906	436	461	795
Stage 1	-	-	-	-	-	-	812	743	-	685	647	-
Stage 2	-	-	-	-	-	-	662	640	-	767	742	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1316	-	-	1440	-	-	413	436	906	373	439	795
Mov Cap-2 Maneuver	-	-	-	-	-	-	413	436	-	373	439	-
Stage 1	-	-	-	-	-	-	796	728	-	671	628	-
Stage 2	-	-	-	-	-	-	608	621	-	671	727	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	1.1	10.5	12.3
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	757	1316	-	-	1440	-	-	560
HCM Lane V/C Ratio	0.134	0.018	-	-	0.029	-	-	0.119
HCM Control Delay (s)	10.5	7.8	0	-	7.6	-	-	12.3
HCM Lane LOS	B	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0.5	0.1	-	-	0.1	-	-	0.4

Queues
500: Fitchrona Rd & McKee Rd

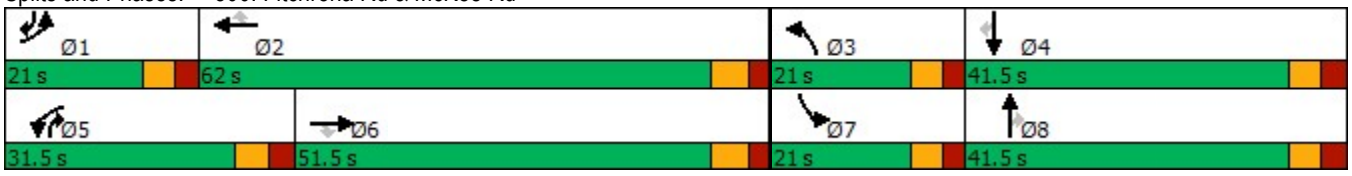
05/01/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	890	200	280	780	5	330	90	225	35	145	65
Future Volume (vph)	35	890	200	280	780	5	330	90	225	35	145	65
Satd. Flow (prot)	1770	3539	1583	3451	3558	1583	3467	1881	1599	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	3451	3558	1583	3467	1881	1599	1770	3539	1583
Satd. Flow (RTOR)												
Lane Group Flow (vph)	38	967	135	304	848	3	359	98	152	38	158	44
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	1	6		5	2		3	8	5	7	4	1
Permitted Phases			6			2			8			4
Total Split (s)	21.0	51.5	51.5	31.5	62.0	62.0	21.0	41.5	31.5	21.0	41.5	21.0
Total Lost Time (s)	6.0	6.5	6.5	6.5	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.0
Act Effct Green (s)	7.9	36.4	36.4	14.9	46.7	46.7	15.2	23.9	45.3	7.9	11.1	25.6
Actuated g/C Ratio	0.08	0.35	0.35	0.14	0.45	0.45	0.15	0.23	0.44	0.08	0.11	0.25
v/c Ratio	0.28	0.78	0.24	0.61	0.53	0.00	0.71	0.23	0.22	0.28	0.42	0.11
Control Delay	53.5	34.8	25.2	48.3	22.5	17.0	52.3	40.5	22.9	53.5	48.7	33.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.5	34.8	25.2	48.3	22.5	17.0	52.3	40.5	22.9	53.5	48.7	33.3
LOS	D	C	C	D	C	B	D	D	C	D	D	C
Approach Delay		34.3			29.3			43.1			46.7	
Approach LOS		C			C			D			D	
Queue Length 50th (ft)	24	291	61	97	212	1	117	57	68	24	52	23
Queue Length 95th (ft)	63	404	117	157	295	7	#210	122	133	63	95	57
Internal Link Dist (ft)		660			1905			794			455	
Turn Bay Length (ft)	160		120	370			220		150	360		360
Base Capacity (vph)	259	1558	696	843	1932	859	508	644	862	259	1211	502
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.62	0.19	0.36	0.44	0.00	0.71	0.15	0.18	0.15	0.13	0.09

Intersection Summary		
Cycle Length: 145.5		
Actuated Cycle Length: 103.3		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.78		
Intersection Signal Delay: 35.1	Intersection LOS: D	
Intersection Capacity Utilization 71.5%	ICU Level of Service C	
Analysis Period (min) 15		

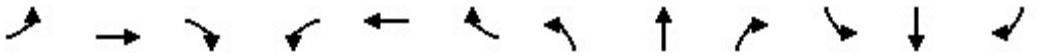
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 500: Fitchrona Rd & McKee Rd



HCM 6th Signalized Intersection Summary
500: Fitchrona Rd & McKee Rd

05/01/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	890	200	280	780	5	330	90	225	35	145	65
Future Volume (veh/h)	35	890	200	280	780	5	330	90	225	35	145	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1880	1880	1870	1885	1885	1885	1870	1870	1870
Adj Flow Rate, veh/h	38	967	135	304	848	3	359	98	152	38	158	44
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	1	1	1	2	2	2
Cap, veh/h	74	1239	552	408	1538	682	449	380	510	74	405	246
Arrive On Green	0.04	0.35	0.35	0.12	0.43	0.43	0.13	0.20	0.20	0.04	0.11	0.11
Sat Flow, veh/h	1781	3554	1585	3474	3572	1585	3483	1885	1598	1781	3554	1585
Grp Volume(v), veh/h	38	967	135	304	848	3	359	98	152	38	158	44
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1737	1786	1585	1742	1885	1598	1781	1777	1585
Q Serve(g_s), s	1.8	21.3	5.3	7.4	15.5	0.1	8.8	3.8	6.3	1.8	3.6	2.1
Cycle Q Clear(g_c), s	1.8	21.3	5.3	7.4	15.5	0.1	8.8	3.8	6.3	1.8	3.6	2.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	74	1239	552	408	1538	682	449	380	510	74	405	246
V/C Ratio(X)	0.52	0.78	0.24	0.74	0.55	0.00	0.80	0.26	0.30	0.52	0.39	0.18
Avail Cap(c_a), veh/h	305	1825	814	991	2262	1004	596	753	826	305	1419	699
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.2	25.5	20.3	37.4	18.6	14.2	37.1	29.5	22.4	41.2	36.0	32.1
Incr Delay (d2), s/veh	5.5	1.3	0.2	2.7	0.3	0.0	5.7	0.4	0.3	5.5	0.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	8.5	1.9	3.2	5.9	0.0	4.0	1.7	2.3	0.9	1.6	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.7	26.9	20.6	40.1	18.9	14.2	42.8	29.8	22.8	46.7	36.6	32.5
LnGrp LOS	D	C	C	D	B	B	D	C	C	D	D	C
Approach Vol, veh/h		1140			1155			609			240	
Approach Delay, s/veh		26.8			24.5			35.7			37.4	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	44.2	17.3	16.5	16.8	37.0	9.6	24.2
Change Period (Y+Rc), s	6.0	6.5	6.0	6.5	6.5	6.5	6.0	6.5
Max Green Setting (Gmax), s	15.0	55.5	15.0	35.0	25.0	45.0	15.0	35.0
Max Q Clear Time (g_c+I1), s	3.8	17.5	10.8	5.6	9.4	23.3	3.8	8.3
Green Ext Time (p_c), s	0.0	6.5	0.5	1.1	0.9	7.2	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	28.5
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	110	1	35	120	0	5	0	45	1	0	0
Future Vol, veh/h	0	110	1	35	120	0	5	0	45	1	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	120	200	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	0	133	1	42	145	0	6	0	54	1	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	145	0	0	134	0	0	362	362	133	390	363	145
Stage 1	-	-	-	-	-	-	133	133	-	229	229	-
Stage 2	-	-	-	-	-	-	229	229	-	161	134	-
Critical Hdwy	4.11	-	-	4.11	-	-	7.11	6.51	6.21	7.11	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Follow-up Hdwy	2.209	-	-	2.209	-	-	3.509	4.009	3.309	3.509	4.009	3.309
Pot Cap-1 Maneuver	1443	-	-	1457	-	-	596	567	919	571	566	905
Stage 1	-	-	-	-	-	-	873	788	-	776	717	-
Stage 2	-	-	-	-	-	-	776	717	-	843	787	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1443	-	-	1457	-	-	583	551	919	525	550	905
Mov Cap-2 Maneuver	-	-	-	-	-	-	583	551	-	525	550	-
Stage 1	-	-	-	-	-	-	873	788	-	776	696	-
Stage 2	-	-	-	-	-	-	754	696	-	793	787	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.7	9.5	11.9
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	869	1443	-	-	1457	-	-	525
HCM Lane V/C Ratio	0.069	-	-	-	0.029	-	-	0.002
HCM Control Delay (s)	9.5	0	-	-	7.5	-	-	11.9
HCM Lane LOS	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0

Queues
500: Fitchrona Rd & McKee Rd

05/01/2024

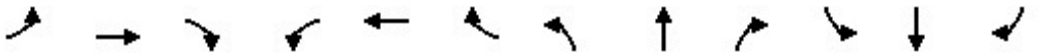
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	510	150	265	430	5	275	75	230	20	90	20
Future Volume (vph)	30	510	150	265	430	5	275	75	230	20	90	20
Satd. Flow (prot)	1752	3505	1568	3418	3523	1568	3467	1881	1599	1787	3574	1599
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3505	1568	3418	3523	1568	3467	1881	1599	1787	3574	1599
Satd. Flow (RTOR)												
Lane Group Flow (vph)	32	543	99	282	457	3	293	80	152	21	96	13
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	1	6		5	2		3	8	5	7	4	1
Permitted Phases			6			2			8			4
Total Split (s)	21.0	51.0	51.0	31.5	62.0	62.0	21.0	41.5	31.5	21.0	41.5	21.0
Total Lost Time (s)	5.5	6.0	6.0	5.5	6.0	6.0	5.5	6.0	5.5	5.5	6.0	5.5
Act Effct Green (s)	7.4	19.2	19.2	12.6	30.2	30.2	13.2	20.1	38.9	6.9	10.4	19.3
Actuated g/C Ratio	0.10	0.26	0.26	0.17	0.40	0.40	0.18	0.27	0.52	0.09	0.14	0.26
v/c Ratio	0.18	0.60	0.25	0.49	0.32	0.00	0.48	0.16	0.18	0.13	0.19	0.03
Control Delay	38.0	28.8	26.2	33.5	19.0	18.7	33.0	26.0	12.6	38.0	34.3	22.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.0	28.8	26.2	33.5	19.0	18.7	33.0	26.0	12.6	38.0	34.3	22.6
LOS	D	C	C	C	B	B	C	C	B	D	C	C
Approach Delay		28.9			24.5			26.0			33.8	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	15	122	38	64	90	1	66	25	28	10	22	4
Queue Length 95th (ft)	45	190	84	113	140	7	119	79	93	34	51	19
Internal Link Dist (ft)		660			1905			794			455	
Turn Bay Length (ft)	160		120	370			220		150	360		360
Base Capacity (vph)	380	2231	998	1243	2671	1189	751	934	1146	387	1775	601
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.24	0.10	0.23	0.17	0.00	0.39	0.09	0.13	0.05	0.05	0.02

Intersection Summary		
Cycle Length: 145.5		
Actuated Cycle Length: 74.6		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.60		
Intersection Signal Delay: 26.9	Intersection LOS: C	
Intersection Capacity Utilization 50.7%	ICU Level of Service A	
Analysis Period (min) 15		

Splits and Phases: 500: Fitchrona Rd & McKee Rd

HCM 6th Signalized Intersection Summary
500: Fitchrona Rd & McKee Rd

05/01/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	510	150	265	430	5	275	75	230	20	90	20
Future Volume (veh/h)	30	510	150	265	430	5	275	75	230	20	90	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1865	1865	1856	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	32	543	99	282	457	3	293	80	152	21	96	13
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	1	1	1	1	1	1
Cap, veh/h	72	828	369	423	1123	498	424	471	595	53	564	317
Arrive On Green	0.04	0.23	0.23	0.12	0.32	0.32	0.12	0.25	0.25	0.03	0.16	0.16
Sat Flow, veh/h	1767	3526	1572	3446	3544	1572	3483	1885	1598	1795	3582	1598
Grp Volume(v), veh/h	32	543	99	282	457	3	293	80	152	21	96	13
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1723	1772	1572	1742	1885	1598	1795	1791	1598
Q Serve(g_s), s	1.1	8.8	3.3	5.0	6.4	0.1	5.1	2.1	4.2	0.7	1.5	0.4
Cycle Q Clear(g_c), s	1.1	8.8	3.3	5.0	6.4	0.1	5.1	2.1	4.2	0.7	1.5	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	72	828	369	423	1123	498	424	471	595	53	564	317
V/C Ratio(X)	0.44	0.66	0.27	0.67	0.41	0.01	0.69	0.17	0.26	0.40	0.17	0.04
Avail Cap(c_a), veh/h	432	2505	1117	1415	3133	1390	852	1056	1091	439	2007	960
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.7	21.9	19.8	26.5	17.0	14.8	26.7	18.6	13.8	30.2	23.1	20.5
Incr Delay (d2), s/veh	4.2	0.9	0.4	1.8	0.2	0.0	2.0	0.2	0.2	4.8	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	3.3	1.1	2.0	2.3	0.0	2.1	0.9	1.4	0.4	0.6	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.9	22.8	20.2	28.4	17.2	14.8	28.7	18.8	14.0	35.0	23.2	20.6
LnGrp LOS	C	C	C	C	B	B	C	B	B	D	C	C
Approach Vol, veh/h		674			742			525			130	
Approach Delay, s/veh		22.9			21.4			22.9			24.9	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	26.1	13.2	16.0	13.3	20.9	7.4	21.8
Change Period (Y+Rc), s	5.5	6.0	5.5	6.0	5.5	6.0	5.5	6.0
Max Green Setting (Gmax), s	15.5	56.0	15.5	35.5	26.0	45.0	15.5	35.5
Max Q Clear Time (g_c+I1), s	3.1	8.4	7.1	3.5	7.0	10.8	2.7	6.2
Green Ext Time (p_c), s	0.0	3.1	0.6	0.6	0.9	4.1	0.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay	22.5
HCM 6th LOS	C

Appendix C
Year 2025 Build Traffic
Peak Hour Analysis Outputs

Year 2025 Build Traffic – Planned Geometry

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	105	1	15	125	20	20	20	30	25	5	25
Future Vol, veh/h	20	105	1	15	125	20	20	20	30	25	5	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	120	200	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	75	75	75	75	75	75	75	75	75
Heavy Vehicles, %	5	5	5	3	3	3	17	17	17	1	1	1
Mvmt Flow	27	140	1	20	167	27	27	27	40	33	7	33

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	194	0	0	141	0	0	435	428	140	449	416	181
Stage 1	-	-	-	-	-	-	194	194	-	221	221	-
Stage 2	-	-	-	-	-	-	241	234	-	228	195	-
Critical Hdwy	4.15	-	-	4.13	-	-	7.27	6.67	6.37	7.11	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.27	5.67	-	6.11	5.51	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.27	5.67	-	6.11	5.51	-
Follow-up Hdwy	2.245	-	-	2.227	-	-	3.653	4.153	3.453	3.509	4.009	3.309
Pot Cap-1 Maneuver	1361	-	-	1436	-	-	506	497	870	522	529	864
Stage 1	-	-	-	-	-	-	774	713	-	784	722	-
Stage 2	-	-	-	-	-	-	730	684	-	777	741	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1361	-	-	1436	-	-	469	479	870	464	510	864
Mov Cap-2 Maneuver	-	-	-	-	-	-	469	479	-	464	510	-
Stage 1	-	-	-	-	-	-	757	697	-	767	712	-
Stage 2	-	-	-	-	-	-	686	674	-	697	725	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.2	0.7	12.3	11.9
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	589	1361	-	-	1436	-	-	594
HCM Lane V/C Ratio	0.158	0.02	-	-	0.014	-	-	0.123
HCM Control Delay (s)	12.3	7.7	0	-	7.5	-	-	11.9
HCM Lane LOS	B	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0.6	0.1	-	-	0	-	-	0.4

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	15	115	155	15	10	75
Future Vol, veh/h	15	115	155	15	10	75
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	153	207	20	13	100

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	227	0	-	0	410	217
Stage 1	-	-	-	-	217	-
Stage 2	-	-	-	-	193	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1341	-	-	-	598	823
Stage 1	-	-	-	-	819	-
Stage 2	-	-	-	-	840	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1341	-	-	-	588	823
Mov Cap-2 Maneuver	-	-	-	-	588	-
Stage 1	-	-	-	-	806	-
Stage 2	-	-	-	-	840	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	10.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1341	-	-	-	786
HCM Lane V/C Ratio	0.015	-	-	-	0.144
HCM Control Delay (s)	7.7	0	-	-	10.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.5

Intersection	
Int Delay, s/veh	4.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	25	135	140	105	220	15
Future Vol, veh/h	25	135	140	105	220	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	152	157	118	247	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	688	256	264	0	-	0
Stage 1	256	-	-	-	-	-
Stage 2	432	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	412	783	1300	-	-	-
Stage 1	787	-	-	-	-	-
Stage 2	655	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	359	783	1300	-	-	-
Mov Cap-2 Maneuver	359	-	-	-	-	-
Stage 1	685	-	-	-	-	-
Stage 2	655	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.5	4.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1300	-	661	-	-
HCM Lane V/C Ratio	0.121	-	0.272	-	-
HCM Control Delay (s)	8.2	0	12.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.4	-	1.1	-	-

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	120	230	240	330	25
Future Vol, veh/h	5	120	230	240	330	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	200	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	135	258	270	371	28

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1171	385	399	0	-	0
Stage 1	385	-	-	-	-	-
Stage 2	786	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	213	663	1160	-	-	-
Stage 1	688	-	-	-	-	-
Stage 2	449	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	166	663	1160	-	-	-
Mov Cap-2 Maneuver	166	-	-	-	-	-
Stage 1	535	-	-	-	-	-
Stage 2	449	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13	4.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1160	-	592	-	-
HCM Lane V/C Ratio	0.223	-	0.237	-	-
HCM Control Delay (s)	9	-	13	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.9	-	0.9	-	-

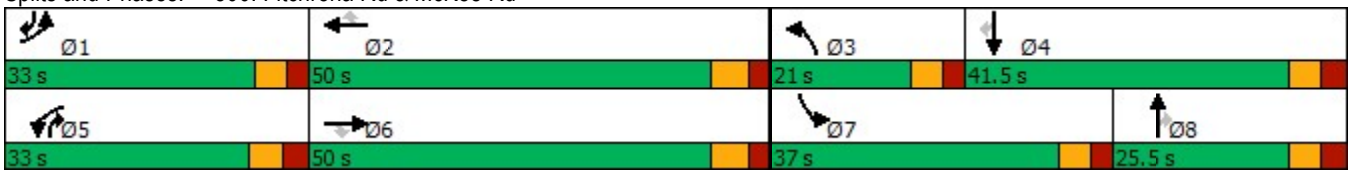
Queues
500: Fitchrona Rd & McKee Rd

05/01/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	880	110	65	785	120	135	100	70	260	90	100
Future Volume (vph)	250	880	110	65	785	120	135	100	70	260	90	100
Satd. Flow (prot)	1703	3406	1524	3259	3360	1495	3400	1845	1568	1719	3438	1538
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1703	3406	1524	3259	3360	1495	3400	1845	1568	1719	3438	1538
Satd. Flow (RTOR)												
Lane Group Flow (vph)	281	989	77	73	882	84	152	112	49	292	101	70
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	1	6		5	2		3	8	5	7	4	1
Permitted Phases			6			2			8			4
Total Split (s)	33.0	50.0	50.0	33.0	50.0	50.0	21.0	25.5	33.0	37.0	41.5	33.0
Total Lost Time (s)	6.0	6.5	6.5	6.5	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.0
Act Effct Green (s)	25.0	58.6	58.6	8.5	39.3	39.3	11.4	13.9	29.0	26.4	28.9	60.5
Actuated g/C Ratio	0.19	0.45	0.45	0.07	0.30	0.30	0.09	0.11	0.22	0.20	0.22	0.47
v/c Ratio	0.86	0.64	0.11	0.34	0.87	0.19	0.51	0.57	0.14	0.84	0.13	0.10
Control Delay	77.2	32.2	24.9	66.6	54.1	37.0	65.5	69.8	44.5	72.3	42.6	21.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.2	32.2	24.9	66.6	54.1	37.0	65.5	69.8	44.5	72.3	42.6	21.1
LOS	E	C	C	E	D	D	E	E	D	E	D	C
Approach Delay		41.2			53.6			63.8			58.1	
Approach LOS		D			D			E			E	
Queue Length 50th (ft)	246	361	40	32	388	55	69	98	36	252	38	34
Queue Length 95th (ft)	#421	483	81	60	500	105	107	164	72	#395	65	66
Internal Link Dist (ft)		660			1905			794			455	
Turn Bay Length (ft)	160		120	370			220		150	360		360
Base Capacity (vph)	360	1534	686	677	1146	509	399	274	573	417	943	745
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.64	0.11	0.11	0.77	0.17	0.38	0.41	0.09	0.70	0.11	0.09

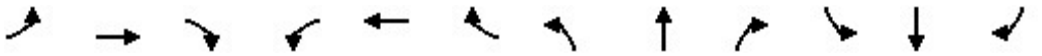
Intersection Summary		
Cycle Length: 145.5		
Actuated Cycle Length: 130		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.87		
Intersection Signal Delay: 50.0	Intersection LOS: D	
Intersection Capacity Utilization 72.3%	ICU Level of Service C	
Analysis Period (min) 15		
# 95th percentile volume exceeds capacity, queue may be longer.		
Queue shown is maximum after two cycles.		

Splits and Phases: 500: Fitchrona Rd & McKee Rd



HCM 6th Signalized Intersection Summary
500: Fitchrona Rd & McKee Rd

05/01/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	880	110	65	785	120	135	100	70	260	90	100
Future Volume (veh/h)	250	880	110	65	785	120	135	100	70	260	90	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1791	1791	1781	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	281	989	77	73	882	84	152	112	49	292	101	70
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	6	6	6	8	8	8	3	3	3	5	5	5
Cap, veh/h	314	1507	672	162	1053	467	218	170	221	327	750	616
Arrive On Green	0.18	0.44	0.44	0.05	0.31	0.31	0.06	0.09	0.09	0.19	0.22	0.22
Sat Flow, veh/h	1725	3441	1535	3309	3403	1510	3428	1856	1572	1739	3469	1547
Grp Volume(v), veh/h	281	989	77	73	882	84	152	112	49	292	101	70
Grp Sat Flow(s),veh/h/ln	1725	1721	1535	1654	1701	1510	1714	1856	1572	1739	1735	1547
Q Serve(g_s), s	17.4	24.8	3.2	2.3	26.4	4.4	4.7	6.4	3.0	17.9	2.6	3.1
Cycle Q Clear(g_c), s	17.4	24.8	3.2	2.3	26.4	4.4	4.7	6.4	3.0	17.9	2.6	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	314	1507	672	162	1053	467	218	170	221	327	750	616
V/C Ratio(X)	0.90	0.66	0.11	0.45	0.84	0.18	0.70	0.66	0.22	0.89	0.13	0.11
Avail Cap(c_a), veh/h	426	1507	672	802	1354	601	471	323	350	493	1111	777
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.7	24.2	18.2	50.5	35.2	27.6	50.1	48.0	41.7	43.3	34.6	20.7
Incr Delay (d2), s/veh	16.8	1.0	0.1	2.0	3.8	0.2	4.0	4.3	0.5	12.9	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	9.7	1.1	1.0	11.1	1.6	2.1	3.1	1.2	8.8	1.1	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.5	25.3	18.2	52.5	39.0	27.8	54.1	52.3	42.2	56.2	34.7	20.8
LnGrp LOS	E	C	B	D	D	C	D	D	D	E	C	C
Approach Vol, veh/h		1347			1039			313			463	
Approach Delay, s/veh		32.2			39.0			51.6			46.2	
Approach LOS		C			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.9	40.3	12.9	30.1	11.8	54.4	26.6	16.5
Change Period (Y+Rc), s	6.0	6.5	6.0	6.5	6.5	6.5	6.0	6.5
Max Green Setting (Gmax), s	27.0	43.5	15.0	35.0	26.5	43.5	31.0	19.0
Max Q Clear Time (g_c+I1), s	19.4	28.4	6.7	5.1	4.3	26.8	19.9	8.4
Green Ext Time (p_c), s	0.5	5.4	0.3	0.8	0.2	6.4	0.7	0.5

Intersection Summary	
HCM 6th Ctrl Delay	38.4
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↱		↱
Traffic Vol, veh/h	0	1240	915	105	0	180
Future Vol, veh/h	0	1240	915	105	0	180
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	150	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1393	1028	118	0	202

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	514
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	505
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	505
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	16.8
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	505
HCM Lane V/C Ratio	-	-	-	0.4
HCM Control Delay (s)	-	-	-	16.8
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	1.9

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	165	5	35	255	10	30	10	70	20	1	35
Future Vol, veh/h	15	165	5	35	255	10	30	10	70	20	1	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	120	200	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2	4	4	4	2	2	2
Mvmt Flow	18	196	6	42	304	12	36	12	83	24	1	42

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	316	0	0	202	0	0	648	632	196	677	632	310
Stage 1	-	-	-	-	-	-	232	232	-	394	394	-
Stage 2	-	-	-	-	-	-	416	400	-	283	238	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.14	6.54	6.24	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.14	5.54	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.14	5.54	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.536	4.036	3.336	3.518	4.018	3.318
Pot Cap-1 Maneuver	1244	-	-	1370	-	-	381	395	840	367	398	730
Stage 1	-	-	-	-	-	-	766	709	-	631	605	-
Stage 2	-	-	-	-	-	-	610	598	-	724	708	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1244	-	-	1370	-	-	346	376	840	311	379	730
Mov Cap-2 Maneuver	-	-	-	-	-	-	346	376	-	311	379	-
Stage 1	-	-	-	-	-	-	754	698	-	621	586	-
Stage 2	-	-	-	-	-	-	556	579	-	631	697	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.9	13.4	13.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	559	1244	-	-	1370	-	-	487
HCM Lane V/C Ratio	0.234	0.014	-	-	0.03	-	-	0.137
HCM Control Delay (s)	13.4	7.9	0	-	7.7	-	-	13.6
HCM Lane LOS	B	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0.9	0	-	-	0.1	-	-	0.5

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	65	175	290	30	5	50
Future Vol, veh/h	65	175	290	30	5	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	77	208	345	36	6	60

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	381	0	-	0	725	363
Stage 1	-	-	-	-	363	-
Stage 2	-	-	-	-	362	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1177	-	-	-	392	682
Stage 1	-	-	-	-	704	-
Stage 2	-	-	-	-	704	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1177	-	-	-	363	682
Mov Cap-2 Maneuver	-	-	-	-	363	-
Stage 1	-	-	-	-	652	-
Stage 2	-	-	-	-	704	-

Approach	EB	WB	SB
HCM Control Delay, s	2.2	0	11.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1177	-	-	-	632
HCM Lane V/C Ratio	0.066	-	-	-	0.104
HCM Control Delay (s)	8.3	0	-	-	11.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.3

Intersection	
Int Delay, s/veh	6.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	40	195	215	200	325	20
Future Vol, veh/h	40	195	215	200	325	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	43	212	234	217	353	22

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1049	364	375	0	-	0
Stage 1	364	-	-	-	-	-
Stage 2	685	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	252	681	1183	-	-	-
Stage 1	703	-	-	-	-	-
Stage 2	500	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	195	681	1183	-	-	-
Mov Cap-2 Maneuver	195	-	-	-	-	-
Stage 1	545	-	-	-	-	-
Stage 2	500	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.8	4.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1183	-	478	-	-
HCM Lane V/C Ratio	0.198	-	0.534	-	-
HCM Control Delay (s)	8.8	0	20.8	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.7	-	3.1	-	-

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	175	240	410	490	30
Future Vol, veh/h	5	175	240	410	490	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	200	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	190	261	446	533	33

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1518	550	566	0	-	0
Stage 1	550	-	-	-	-	-
Stage 2	968	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	131	535	1006	-	-	-
Stage 1	578	-	-	-	-	-
Stage 2	368	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	97	535	1006	-	-	-
Mov Cap-2 Maneuver	97	-	-	-	-	-
Stage 1	428	-	-	-	-	-
Stage 2	368	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.8	3.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1006	-	475	-	-
HCM Lane V/C Ratio	0.259	-	0.412	-	-
HCM Control Delay (s)	9.8	-	17.8	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	1	-	2	-	-

Queues
500: Fitchrona Rd & McKee Rd

05/01/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	350	795	200	280	830	165	330	135	225	345	185	135
Future Volume (vph)	350	795	200	280	830	165	330	135	225	345	185	135
Satd. Flow (prot)	1770	3539	1583	3451	3558	1583	3467	1881	1599	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	3451	3558	1583	3467	1881	1599	1770	3539	1583
Satd. Flow (RTOR)												
Lane Group Flow (vph)	380	864	135	304	902	111	359	147	152	375	201	91
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	1	6		5	2		3	8	5	7	4	1
Permitted Phases			6			2			8			4
Total Split (s)	37.0	59.5	59.5	27.0	49.5	49.5	28.0	20.0	27.0	39.0	31.0	37.0
Total Lost Time (s)	6.0	6.5	6.5	6.5	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.0
Act Effct Green (s)	31.1	53.7	53.7	17.3	40.4	40.4	19.2	13.1	36.9	31.8	25.8	63.4
Actuated g/C Ratio	0.22	0.38	0.38	0.12	0.29	0.29	0.14	0.09	0.26	0.22	0.18	0.45
v/c Ratio	0.98	0.64	0.23	0.72	0.89	0.25	0.76	0.84	0.36	0.94	0.31	0.13
Control Delay	95.5	39.3	32.1	70.4	60.1	40.7	70.6	100.8	45.8	86.9	52.9	25.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	95.5	39.3	32.1	70.4	60.1	40.7	70.6	100.8	45.8	86.9	52.9	25.0
LOS	F	D	C	E	E	D	E	F	D	F	D	C
Approach Delay		54.1			60.8			71.6			68.2	
Approach LOS		D			E			E			E	
Queue Length 50th (ft)	~368	351	86	144	426	80	171	140	118	352	87	51
Queue Length 95th (ft)	#585	437	143	193	513	134	224	#263	183	#549	130	91
Internal Link Dist (ft)		660			1905			794			455	
Turn Bay Length (ft)	160		120	370			220		150	360		360
Base Capacity (vph)	389	1355	606	501	1083	482	540	179	454	413	644	708
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.64	0.22	0.61	0.83	0.23	0.66	0.82	0.33	0.91	0.31	0.13

Intersection Summary

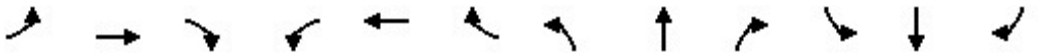
Cycle Length: 145.5
Actuated Cycle Length: 141.5
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 61.5 Intersection LOS: E
Intersection Capacity Utilization 90.5% ICU Level of Service E
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 500: Fitchrona Rd & McKee Rd

Timing Plan: PM Peak Hour

HCM 6th Signalized Intersection Summary
500: Fitchrona Rd & McKee Rd

05/01/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	350	795	200	280	830	165	330	135	225	345	185	135
Future Volume (veh/h)	350	795	200	280	830	165	330	135	225	345	185	135
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1880	1880	1870	1885	1885	1885	1870	1870	1870
Adj Flow Rate, veh/h	380	864	135	304	902	111	359	147	152	375	201	91
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	1	1	1	2	2	2
Cap, veh/h	394	1402	625	362	1005	446	418	181	320	398	709	666
Arrive On Green	0.22	0.39	0.39	0.10	0.28	0.28	0.12	0.10	0.10	0.22	0.20	0.20
Sat Flow, veh/h	1781	3554	1585	3474	3572	1585	3483	1885	1598	1781	3554	1585
Grp Volume(v), veh/h	380	864	135	304	902	111	359	147	152	375	201	91
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1737	1786	1585	1742	1885	1598	1781	1777	1585
Q Serve(g_s), s	29.6	27.3	7.9	12.1	34.1	7.6	14.2	10.7	11.8	29.1	6.7	5.0
Cycle Q Clear(g_c), s	29.6	27.3	7.9	12.1	34.1	7.6	14.2	10.7	11.8	29.1	6.7	5.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	394	1402	625	362	1005	446	418	181	320	398	709	666
V/C Ratio(X)	0.97	0.62	0.22	0.84	0.90	0.25	0.86	0.81	0.47	0.94	0.28	0.14
Avail Cap(c_a), veh/h	394	1402	625	508	1095	486	546	181	320	419	709	666
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.1	34.0	28.1	61.7	48.5	39.0	60.6	62.1	49.6	53.6	47.7	25.0
Incr Delay (d2), s/veh	36.3	0.8	0.2	8.7	9.4	0.3	10.4	23.4	1.1	29.2	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.0	11.7	3.0	5.7	16.2	3.0	6.8	6.3	4.8	16.2	3.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	90.4	34.8	28.3	70.4	57.9	39.2	71.0	85.5	50.7	82.8	47.9	25.1
LnGrp LOS	F	C	C	E	E	D	E	F	D	F	D	C
Approach Vol, veh/h		1379			1317			658			667	
Approach Delay, s/veh		49.5			59.2			69.5			64.4	
Approach LOS		D			E			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	37.0	46.0	22.8	34.5	21.1	61.9	37.3	20.0
Change Period (Y+Rc), s	6.0	6.5	6.0	6.5	6.5	6.5	6.0	6.5
Max Green Setting (Gmax), s	31.0	43.0	22.0	24.5	20.5	53.0	33.0	13.5
Max Q Clear Time (g_c+I1), s	31.6	36.1	16.2	8.7	14.1	29.3	31.1	13.8
Green Ext Time (p_c), s	0.0	3.4	0.7	1.3	0.6	6.5	0.3	0.0

Intersection Summary	
HCM 6th Ctrl Delay	58.4
HCM 6th LOS	E

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↱		↱
Traffic Vol, veh/h	0	1345	1150	145	0	230
Future Vol, veh/h	0	1345	1150	145	0	230
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	150	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1462	1250	158	0	250

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	625
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	428
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	428
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	24.6
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	428
HCM Lane V/C Ratio	-	-	-	0.584
HCM Control Delay (s)	-	-	-	24.6
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	3.6

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	190	1	35	200	0	35	0	45	1	0	0
Future Vol, veh/h	0	190	1	35	200	0	35	0	45	1	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	120	200	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	0	229	1	42	241	0	42	0	54	1	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	241	0	0	230	0	0	554	554	229	582	555	241
Stage 1	-	-	-	-	-	-	229	229	-	325	325	-
Stage 2	-	-	-	-	-	-	325	325	-	257	230	-
Critical Hdwy	4.11	-	-	4.11	-	-	7.11	6.51	6.21	7.11	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.51	-	6.11	5.51	-
Follow-up Hdwy	2.209	-	-	2.209	-	-	3.509	4.009	3.309	3.509	4.009	3.309
Pot Cap-1 Maneuver	1331	-	-	1344	-	-	445	442	813	426	441	800
Stage 1	-	-	-	-	-	-	776	717	-	690	651	-
Stage 2	-	-	-	-	-	-	690	651	-	750	716	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1331	-	-	1344	-	-	434	428	813	388	427	800
Mov Cap-2 Maneuver	-	-	-	-	-	-	434	428	-	388	427	-
Stage 1	-	-	-	-	-	-	776	717	-	690	631	-
Stage 2	-	-	-	-	-	-	668	631	-	700	716	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.2	12.3	14.3
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	588	1331	-	-	1344	-	-	388
HCM Lane V/C Ratio	0.164	-	-	-	0.031	-	-	0.003
HCM Control Delay (s)	12.3	0	-	-	7.8	-	-	14.3
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.6	0	-	-	0.1	-	-	0

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	25	185	190	45	5	50
Future Vol, veh/h	25	185	190	45	5	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	223	229	54	6	60

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	283	0	-	0	539	256
Stage 1	-	-	-	-	256	-
Stage 2	-	-	-	-	283	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1279	-	-	-	503	783
Stage 1	-	-	-	-	787	-
Stage 2	-	-	-	-	765	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1279	-	-	-	489	783
Mov Cap-2 Maneuver	-	-	-	-	489	-
Stage 1	-	-	-	-	766	-
Stage 2	-	-	-	-	765	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	10.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1279	-	-	-	742
HCM Lane V/C Ratio	0.024	-	-	-	0.089
HCM Control Delay (s)	7.9	0	-	-	10.3
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3

Intersection	
Int Delay, s/veh	11.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	70	230	285	140	220	25
Future Vol, veh/h	70	230	285	140	220	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	74	245	303	149	234	27

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1003	248	261	0	-	0
Stage 1	248	-	-	-	-	-
Stage 2	755	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	268	791	1303	-	-	-
Stage 1	793	-	-	-	-	-
Stage 2	464	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	200	791	1303	-	-	-
Mov Cap-2 Maneuver	200	-	-	-	-	-
Stage 1	592	-	-	-	-	-
Stage 2	464	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	27.6	5.8	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1303	-	468	-	-
HCM Lane V/C Ratio	0.233	-	0.682	-	-
HCM Control Delay (s)	8.6	0	27.6	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0.9	-	5.1	-	-

Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	245	335	420	410	40
Future Vol, veh/h	5	245	335	420	410	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	200	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	261	356	447	436	43

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1617	458	479	0	-	0
Stage 1	458	-	-	-	-	-
Stage 2	1159	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	114	603	1083	-	-	-
Stage 1	637	-	-	-	-	-
Stage 2	299	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	76	603	1083	-	-	-
Mov Cap-2 Maneuver	76	-	-	-	-	-
Stage 1	427	-	-	-	-	-
Stage 2	299	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.4	4.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1083	-	530	-	-
HCM Lane V/C Ratio	0.329	-	0.502	-	-
HCM Control Delay (s)	9.9	-	18.4	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	1.4	-	2.8	-	-

Queues
500: Fitchrona Rd & McKee Rd

05/01/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	415	445	150	265	540	200	275	140	230	405	150	100
Future Volume (vph)	415	445	150	265	540	200	275	140	230	405	150	100
Satd. Flow (prot)	1752	3505	1568	3418	3523	1568	3467	1881	1599	1787	3574	1599
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3505	1568	3418	3523	1568	3467	1881	1599	1787	3574	1599
Satd. Flow (RTOR)												
Lane Group Flow (vph)	441	473	99	282	574	132	293	149	152	431	160	66
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	1	6		5	2		3	8	5	7	4	1
Permitted Phases			6			2			8			4
Total Split (s)	40.0	53.5	53.5	28.0	41.5	41.5	24.0	22.0	28.0	42.0	40.0	40.0
Total Lost Time (s)	5.5	6.0	6.0	5.5	6.0	6.0	5.5	6.0	5.5	5.5	6.0	5.5
Act Effct Green (s)	34.7	46.2	46.2	16.5	28.0	28.0	16.0	14.4	36.9	35.3	33.7	74.4
Actuated g/C Ratio	0.26	0.34	0.34	0.12	0.21	0.21	0.12	0.11	0.27	0.26	0.25	0.55
v/c Ratio	0.98	0.40	0.19	0.68	0.79	0.41	0.72	0.75	0.35	0.93	0.18	0.08
Control Delay	89.6	36.1	34.1	66.3	59.7	50.9	69.0	82.7	42.4	76.4	42.0	16.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	89.6	36.1	34.1	66.3	59.7	50.9	69.0	82.7	42.4	76.4	42.0	16.5
LOS	F	D	C	E	E	D	E	F	D	E	D	B
Approach Delay		59.2			60.4			65.6			62.0	
Approach LOS		E			E			E			E	
Queue Length 50th (ft)	~405	172	63	127	261	104	132	131	109	378	58	27
Queue Length 95th (ft)	#677	234	114	178	327	168	190	#237	177	#623	98	58
Internal Link Dist (ft)		660			1905			794			455	
Turn Bay Length (ft)	160		120	370			220		150	360		360
Base Capacity (vph)	448	1241	555	570	927	412	475	223	508	483	919	878
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.38	0.18	0.49	0.62	0.32	0.62	0.67	0.30	0.89	0.17	0.08

Intersection Summary

Cycle Length: 145.5
Actuated Cycle Length: 135.5
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 61.3 Intersection LOS: E
Intersection Capacity Utilization 87.8% ICU Level of Service E
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 500: Fitchrona Rd & McKee Rd

Timing Plan: Saturday Midday Peak Hour

HCM 6th Signalized Intersection Summary
500: Fitchrona Rd & McKee Rd

05/01/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	415	445	150	265	540	200	275	140	230	405	150	100
Future Volume (veh/h)	415	445	150	265	540	200	275	140	230	405	150	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1865	1865	1856	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	441	473	99	282	574	132	293	149	152	431	160	66
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	1	1	1	1	1	1
Cap, veh/h	464	1267	565	349	701	311	356	194	326	459	918	829
Arrive On Green	0.26	0.36	0.36	0.10	0.20	0.20	0.10	0.10	0.10	0.26	0.26	0.26
Sat Flow, veh/h	1767	3526	1572	3446	3544	1572	3483	1885	1598	1795	3582	1598
Grp Volume(v), veh/h	441	473	99	282	574	132	293	149	152	431	160	66
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1723	1772	1572	1742	1885	1598	1795	1791	1598
Q Serve(g_s), s	31.2	12.6	5.5	10.2	19.7	9.3	10.5	9.8	10.6	29.9	4.4	2.6
Cycle Q Clear(g_c), s	31.2	12.6	5.5	10.2	19.7	9.3	10.5	9.8	10.6	29.9	4.4	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	464	1267	565	349	701	311	356	194	326	459	918	829
V/C Ratio(X)	0.95	0.37	0.18	0.81	0.82	0.42	0.82	0.77	0.47	0.94	0.17	0.08
Avail Cap(c_a), veh/h	480	1318	588	610	990	439	507	237	363	516	958	847
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.0	30.1	27.8	55.9	48.8	44.6	55.9	55.6	44.5	46.3	36.8	15.3
Incr Delay (d2), s/veh	28.4	0.2	0.1	4.5	3.8	0.9	7.3	11.7	1.0	23.8	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.0	5.3	2.1	4.6	8.9	3.7	4.9	5.2	4.3	16.3	2.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.5	30.3	28.0	60.4	52.6	45.6	63.2	67.2	45.6	70.1	36.9	15.4
LnGrp LOS	E	C	C	E	D	D	E	E	D	E	D	B
Approach Vol, veh/h		1013			988			594			657	
Approach Delay, s/veh		49.3			53.9			59.7			56.5	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	38.9	31.1	18.5	38.6	18.4	51.7	38.0	19.0
Change Period (Y+Rc), s	5.5	6.0	5.5	6.0	5.5	6.0	5.5	6.0
Max Green Setting (Gmax), s	34.5	35.5	18.5	34.0	22.5	47.5	36.5	16.0
Max Q Clear Time (g_c+I1), s	33.2	21.7	12.5	6.4	12.2	14.6	31.9	12.6
Green Ext Time (p_c), s	0.2	3.4	0.5	1.2	0.7	3.5	0.6	0.4

Intersection Summary	
HCM 6th Ctrl Delay	54.0
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↱		↱
Traffic Vol, veh/h	0	1010	740	175	0	290
Future Vol, veh/h	0	1010	740	175	0	290
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	150	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1098	804	190	0	315

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	402
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	598
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	598
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	17.5
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	598
HCM Lane V/C Ratio	-	-	-	0.527
HCM Control Delay (s)	-	-	-	17.5
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	3.1

Appendix D
Year 2025 Build Traffic
Peak Hour Analysis Outputs

Year 2025 Build Traffic – Improved Geometry

Year 2025 Build Traffic – Alternative Improved Geometry

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	25	135	140	105	220	15
Future Vol, veh/h	25	135	140	105	220	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	50	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	152	157	118	247	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	688	256	264	0	-	0
Stage 1	256	-	-	-	-	-
Stage 2	432	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	412	783	1300	-	-	-
Stage 1	787	-	-	-	-	-
Stage 2	655	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	359	783	1300	-	-	-
Mov Cap-2 Maneuver	359	-	-	-	-	-
Stage 1	685	-	-	-	-	-
Stage 2	655	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.5	4.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1300	-	359	783	-	-
HCM Lane V/C Ratio	0.121	-	0.078	0.194	-	-
HCM Control Delay (s)	8.2	0	15.9	10.7	-	-
HCM Lane LOS	A	A	C	B	-	-
HCM 95th %tile Q(veh)	0.4	-	0.3	0.7	-	-

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	120	230	240	330	25
Future Vol, veh/h	5	120	230	240	330	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	50	0	200	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	135	258	270	371	28

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1171	385	399	0	-	0
Stage 1	385	-	-	-	-	-
Stage 2	786	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	213	663	1160	-	-	-
Stage 1	688	-	-	-	-	-
Stage 2	449	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	166	663	1160	-	-	-
Mov Cap-2 Maneuver	166	-	-	-	-	-
Stage 1	535	-	-	-	-	-
Stage 2	449	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.4	4.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1160	-	166	663	-	-
HCM Lane V/C Ratio	0.223	-	0.034	0.203	-	-
HCM Control Delay (s)	9	-	27.4	11.8	-	-
HCM Lane LOS	A	-	D	B	-	-
HCM 95th %tile Q(veh)	0.9	-	0.1	0.8	-	-

Queues
500: Fitchrona Rd & McKee Rd

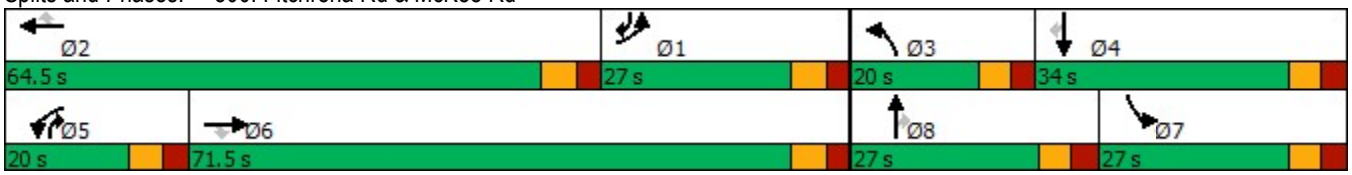
05/01/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	880	110	65	785	120	135	100	70	260	90	100
Future Volume (vph)	250	880	110	65	785	120	135	100	70	260	90	100
Satd. Flow (prot)	3303	3406	1524	3259	3360	1495	3400	1845	1568	3335	3438	1538
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3303	3406	1524	3259	3360	1495	3400	1845	1568	3335	3438	1538
Satd. Flow (RTOR)												
Lane Group Flow (vph)	281	989	77	73	882	84	152	112	49	292	101	70
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	1	6		5	2		3	8	5	7	4	1
Permitted Phases			6			2			8			4
Total Split (s)	27.0	71.5	71.5	20.0	64.5	64.5	20.0	27.0	20.0	27.0	34.0	27.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.0	6.5	6.5	6.5	6.5	6.5
Act Effct Green (s)	14.9	46.5	46.5	8.1	36.4	36.4	10.5	13.0	21.1	15.1	18.1	33.0
Actuated g/C Ratio	0.14	0.44	0.44	0.08	0.34	0.34	0.10	0.12	0.20	0.14	0.17	0.31
v/c Ratio	0.61	0.66	0.12	0.29	0.77	0.16	0.45	0.50	0.16	0.62	0.17	0.15
Control Delay	51.5	27.6	21.0	55.3	36.7	26.8	53.5	55.9	23.6	51.5	41.9	17.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.5	27.6	21.0	55.3	36.7	26.8	53.5	55.9	23.6	51.5	41.9	17.5
LOS	D	C	C	E	D	C	D	E	C	D	D	B
Approach Delay		32.2			37.2			49.7			44.3	
Approach LOS		C			D			D			D	
Queue Length 50th (ft)	91	281	31	24	271	38	50	71	17	94	30	22
Queue Length 95th (ft)	168	423	71	58	418	87	102	155	49	174	67	56
Internal Link Dist (ft)		660			1905			794			455	
Turn Bay Length (ft)	300		120	370			220		150	300		360
Base Capacity (vph)	660	2159	966	428	1900	845	464	369	397	666	921	569
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.46	0.08	0.17	0.46	0.10	0.33	0.30	0.12	0.44	0.11	0.12

Intersection Summary

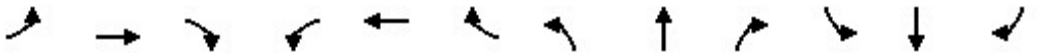
Cycle Length: 145.5
Actuated Cycle Length: 106.3
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 37.4 — Intersection LOS: D
Intersection Capacity Utilization 59.7% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 500: Fitchrona Rd & McKee Rd



HCM 6th Signalized Intersection Summary
500: Fitchrona Rd & McKee Rd

05/01/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	880	110	65	785	120	135	100	70	260	90	100
Future Volume (veh/h)	250	880	110	65	785	120	135	100	70	260	90	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1791	1791	1781	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	281	989	77	73	882	84	152	112	49	292	101	70
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	6	6	6	8	8	8	3	3	3	5	5	5
Cap, veh/h	380	1362	608	193	1160	515	238	221	279	394	598	442
Arrive On Green	0.11	0.40	0.40	0.06	0.34	0.34	0.07	0.12	0.12	0.12	0.17	0.17
Sat Flow, veh/h	3346	3441	1535	3309	3403	1510	3428	1856	1572	3374	3469	1547
Grp Volume(v), veh/h	281	989	77	73	882	84	152	112	49	292	101	70
Grp Sat Flow(s),veh/h/ln	1673	1721	1535	1654	1701	1510	1714	1856	1572	1687	1735	1547
Q Serve(g_s), s	6.8	20.4	2.7	1.8	19.4	3.3	3.6	4.7	1.3	7.0	2.1	0.6
Cycle Q Clear(g_c), s	6.8	20.4	2.7	1.8	19.4	3.3	3.6	4.7	1.3	7.0	2.1	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	380	1362	608	193	1160	515	238	221	279	394	598	442
V/C Ratio(X)	0.74	0.73	0.13	0.38	0.76	0.16	0.64	0.51	0.18	0.74	0.17	0.16
Avail Cap(c_a), veh/h	817	2665	1189	532	2352	1043	572	453	476	824	1137	683
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.0	21.5	16.1	38.0	24.6	19.3	38.0	34.6	11.3	35.8	29.6	8.6
Incr Delay (d2), s/veh	2.8	0.8	0.1	1.2	1.1	0.1	2.8	1.8	0.3	2.8	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	7.6	0.9	0.7	7.3	1.1	1.6	2.2	0.6	3.0	0.9	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.8	22.2	16.2	39.3	25.7	19.5	40.9	36.4	11.6	38.6	29.7	8.7
LnGrp LOS	D	C	B	D	C	B	D	D	B	D	C	A
Approach Vol, veh/h		1347			1039			313			463	
Approach Delay, s/veh		25.4			26.1			34.7			32.2	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	35.1	11.8	21.0	11.4	39.7	16.3	16.5
Change Period (Y+Rc), s	6.5	6.5	6.0	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	20.5	58.0	14.0	27.5	13.5	65.0	20.5	20.5
Max Q Clear Time (g_c+I1), s	8.8	21.4	5.6	4.1	3.8	22.4	9.0	6.7
Green Ext Time (p_c), s	0.7	7.2	0.3	0.8	0.1	8.6	0.8	0.5

Intersection Summary	
HCM 6th Ctrl Delay	27.5
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	5.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	40	195	215	200	325	20
Future Vol, veh/h	40	195	215	200	325	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	50	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	43	212	234	217	353	22

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1049	364	375	0	-	0
Stage 1	364	-	-	-	-	-
Stage 2	685	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	252	681	1183	-	-	-
Stage 1	703	-	-	-	-	-
Stage 2	500	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	195	681	1183	-	-	-
Mov Cap-2 Maneuver	195	-	-	-	-	-
Stage 1	545	-	-	-	-	-
Stage 2	500	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.4	4.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1183	-	195	681	-	-
HCM Lane V/C Ratio	0.198	-	0.223	0.311	-	-
HCM Control Delay (s)	8.8	0	28.7	12.7	-	-
HCM Lane LOS	A	A	D	B	-	-
HCM 95th %tile Q(veh)	0.7	-	0.8	1.3	-	-

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	175	240	410	490	30
Future Vol, veh/h	5	175	240	410	490	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	50	0	200	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	190	261	446	533	33

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1518	550	566	0	-	0
Stage 1	550	-	-	-	-	-
Stage 2	968	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	131	535	1006	-	-	-
Stage 1	578	-	-	-	-	-
Stage 2	368	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	97	535	1006	-	-	-
Mov Cap-2 Maneuver	97	-	-	-	-	-
Stage 1	428	-	-	-	-	-
Stage 2	368	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.2	3.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1006	-	97	535	-	-
HCM Lane V/C Ratio	0.259	-	0.056	0.356	-	-
HCM Control Delay (s)	9.8	-	44.3	15.4	-	-
HCM Lane LOS	A	-	E	C	-	-
HCM 95th %tile Q(veh)	1	-	0.2	1.6	-	-

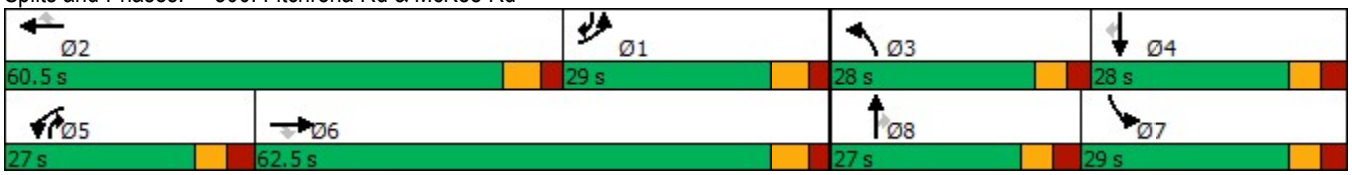
Queues
500: Fitchrona Rd & McKee Rd

05/01/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	350	795	200	280	830	165	330	135	225	345	185	135
Future Volume (vph)	350	795	200	280	830	165	330	135	225	345	185	135
Satd. Flow (prot)	3433	3539	1583	3451	3558	1583	3467	1881	1599	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	3539	1583	3451	3558	1583	3467	1881	1599	3433	3539	1583
Satd. Flow (RTOR)												
Lane Group Flow (vph)	380	864	135	304	902	111	359	147	152	375	201	91
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	1	6		5	2		3	8	5	7	4	1
Permitted Phases			6			2			8			4
Total Split (s)	29.0	62.5	62.5	27.0	60.5	60.5	28.0	27.0	27.0	29.0	28.0	29.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.0	6.5	6.5	6.5	6.5	6.5
Act Effct Green (s)	18.1	40.4	40.4	15.8	38.1	38.1	17.4	14.9	30.6	18.0	16.0	34.1
Actuated g/C Ratio	0.16	0.35	0.35	0.14	0.33	0.33	0.15	0.13	0.26	0.16	0.14	0.29
v/c Ratio	0.71	0.70	0.25	0.65	0.77	0.21	0.69	0.61	0.36	0.70	0.41	0.20
Control Delay	56.7	36.6	29.5	57.0	40.7	30.8	56.7	62.9	22.5	56.6	51.3	19.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.7	36.6	29.5	57.0	40.7	30.8	56.7	62.9	22.5	56.6	51.3	19.0
LOS	E	D	C	E	D	C	E	E	C	E	D	B
Approach Delay		41.4			43.7			50.2			49.9	
Approach LOS		D			D			D			D	
Queue Length 50th (ft)	139	290	71	111	317	60	131	105	56	137	73	30
Queue Length 95th (ft)	235	422	138	192	455	118	223	206	115	232	132	70
Internal Link Dist (ft)		660			1905			794			455	
Turn Bay Length (ft)	300		120	370			220		150	300		360
Base Capacity (vph)	689	1768	791	631	1714	762	680	344	497	689	678	536
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.49	0.17	0.48	0.53	0.15	0.53	0.43	0.31	0.54	0.30	0.17

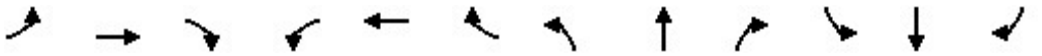
Intersection Summary	
Cycle Length: 145.5	
Actuated Cycle Length: 116	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 45.0	Intersection LOS: D
Intersection Capacity Utilization 72.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 500: Fitchrona Rd & McKee Rd



HCM 6th Signalized Intersection Summary
500: Fitchrona Rd & McKee Rd

05/01/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	350	795	200	280	830	165	330	135	225	345	185	135
Future Volume (veh/h)	350	795	200	280	830	165	330	135	225	345	185	135
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1880	1880	1870	1885	1885	1885	1870	1870	1870
Adj Flow Rate, veh/h	380	864	135	304	902	111	359	147	152	375	201	91
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	1	1	1	2	2	2
Cap, veh/h	481	1253	559	400	1174	521	460	206	359	477	430	412
Arrive On Green	0.14	0.35	0.35	0.12	0.33	0.33	0.13	0.11	0.11	0.14	0.12	0.12
Sat Flow, veh/h	3456	3554	1585	3474	3572	1585	3483	1885	1598	3456	3554	1585
Grp Volume(v), veh/h	380	864	135	304	902	111	359	147	152	375	201	91
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1737	1786	1585	1742	1885	1598	1728	1777	1585
Q Serve(g_s), s	9.7	19.0	5.5	7.8	20.7	4.6	9.1	6.9	4.1	9.6	4.8	1.1
Cycle Q Clear(g_c), s	9.7	19.0	5.5	7.8	20.7	4.6	9.1	6.9	4.1	9.6	4.8	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	481	1253	559	400	1174	521	460	206	359	477	430	412
V/C Ratio(X)	0.79	0.69	0.24	0.76	0.77	0.21	0.78	0.71	0.42	0.79	0.47	0.22
Avail Cap(c_a), veh/h	851	2179	972	780	2112	937	839	423	542	851	837	594
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.0	25.3	20.9	39.2	27.5	22.1	38.4	39.3	11.3	38.1	37.4	9.6
Incr Delay (d2), s/veh	3.0	0.7	0.2	3.0	1.1	0.2	2.9	4.5	0.8	2.9	0.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	7.6	2.0	3.4	8.4	1.7	4.0	3.4	1.9	4.2	2.1	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.0	26.0	21.1	42.2	28.6	22.3	41.3	43.8	12.1	41.0	38.2	9.9
LnGrp LOS	D	C	C	D	C	C	D	D	B	D	D	A
Approach Vol, veh/h		1379			1317			658			667	
Approach Delay, s/veh		29.6			31.2			35.1			35.9	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.2	36.5	18.1	17.5	17.0	38.7	19.1	16.5
Change Period (Y+Rc), s	6.5	6.5	6.0	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	22.5	54.0	22.0	21.5	20.5	56.0	22.5	20.5
Max Q Clear Time (g_c+I1), s	11.7	22.7	11.1	6.8	9.8	21.0	11.6	8.9
Green Ext Time (p_c), s	1.0	7.3	1.0	1.3	0.8	7.2	1.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	32.1
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	7.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	70	230	285	140	220	25
Future Vol, veh/h	70	230	285	140	220	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	50	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	74	245	303	149	234	27

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1003	248	261	0	-	0
Stage 1	248	-	-	-	-	-
Stage 2	755	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	268	791	1303	-	-	-
Stage 1	793	-	-	-	-	-
Stage 2	464	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	200	791	1303	-	-	-
Mov Cap-2 Maneuver	200	-	-	-	-	-
Stage 1	592	-	-	-	-	-
Stage 2	464	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.7	5.8	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1303	-	200	791	-	-
HCM Lane V/C Ratio	0.233	-	0.372	0.309	-	-
HCM Control Delay (s)	8.6	0	33.3	11.6	-	-
HCM Lane LOS	A	A	D	B	-	-
HCM 95th %tile Q(veh)	0.9	-	1.6	1.3	-	-

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	245	335	420	410	40
Future Vol, veh/h	5	245	335	420	410	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	50	0	200	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	261	356	447	436	43

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1617	458	479	0	-	0
Stage 1	458	-	-	-	-	-
Stage 2	1159	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	114	603	1083	-	-	-
Stage 1	637	-	-	-	-	-
Stage 2	299	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	76	603	1083	-	-	-
Mov Cap-2 Maneuver	76	-	-	-	-	-
Stage 1	427	-	-	-	-	-
Stage 2	299	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.2	4.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1083	-	76	603	-	-
HCM Lane V/C Ratio	0.329	-	0.07	0.432	-	-
HCM Control Delay (s)	9.9	-	55.9	15.4	-	-
HCM Lane LOS	A	-	F	C	-	-
HCM 95th %tile Q(veh)	1.4	-	0.2	2.2	-	-

Queues
500: Fitchrona Rd & McKee Rd

05/01/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	415	445	150	265	540	200	275	140	230	405	150	100
Future Volume (vph)	415	445	150	265	540	200	275	140	230	405	150	100
Satd. Flow (prot)	3400	3505	1568	3418	3523	1568	3467	1881	1599	3467	3574	1599
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3400	3505	1568	3418	3523	1568	3467	1881	1599	3467	3574	1599
Satd. Flow (RTOR)												
Lane Group Flow (vph)	441	473	99	282	574	132	293	149	152	431	160	66
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	1	6		5	2		3	8	5	7	4	1
Permitted Phases			6			2			8			4
Total Split (s)	36.0	56.0	56.0	28.0	48.0	48.0	25.5	26.0	28.0	35.5	36.0	36.0
Total Lost Time (s)	6.0	6.0	6.0	5.5	6.0	6.0	5.5	6.0	5.5	6.0	6.0	6.0
Act Effct Green (s)	19.5	29.7	29.7	14.6	24.2	24.2	14.6	14.3	29.4	19.0	19.2	38.7
Actuated g/C Ratio	0.19	0.29	0.29	0.14	0.24	0.24	0.14	0.14	0.29	0.19	0.19	0.38
v/c Ratio	0.68	0.46	0.22	0.58	0.69	0.36	0.59	0.56	0.33	0.67	0.24	0.11
Control Delay	46.0	32.2	30.9	48.6	41.4	37.9	48.9	53.7	17.9	46.1	38.9	11.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.0	32.2	30.9	48.6	41.4	37.9	48.9	53.7	17.9	46.1	38.9	11.9
LOS	D	C	C	D	D	D	D	D	B	D	D	B
Approach Delay		38.1			43.0			42.1			40.9	
Approach LOS		D			D			D			D	
Queue Length 50th (ft)	134	128	47	87	175	70	90	89	40	131	45	14
Queue Length 95th (ft)	240	222	110	167	297	154	173	196	92	236	95	38
Internal Link Dist (ft)		660			1905			794			455	
Turn Bay Length (ft)	300		120	370			220		150	300		360
Base Capacity (vph)	1042	1790	800	785	1511	672	708	384	600	1044	1095	791
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.26	0.12	0.36	0.38	0.20	0.41	0.39	0.25	0.41	0.15	0.08

Intersection Summary		
Cycle Length: 145.5		
Actuated Cycle Length: 102.1		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.69		
Intersection Signal Delay: 40.9	Intersection LOS: D	
Intersection Capacity Utilization 66.6%	ICU Level of Service C	
Analysis Period (min) 15		

Splits and Phases: 500: Fitchrona Rd & McKee Rd

HCM 6th Signalized Intersection Summary
500: Fitchrona Rd & McKee Rd

05/01/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	415	445	150	265	540	200	275	140	230	405	150	100
Future Volume (veh/h)	415	445	150	265	540	200	275	140	230	405	150	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1865	1865	1856	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	441	473	99	282	574	132	293	149	152	431	160	66
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	1	1	1	1	1	1
Cap, veh/h	574	1021	455	395	817	362	406	244	390	567	651	558
Arrive On Green	0.17	0.29	0.29	0.11	0.23	0.23	0.12	0.13	0.13	0.16	0.18	0.18
Sat Flow, veh/h	3428	3526	1572	3446	3544	1572	3483	1885	1598	3483	3582	1598
Grp Volume(v), veh/h	441	473	99	282	574	132	293	149	152	431	160	66
Grp Sat Flow(s),veh/h/ln	1714	1763	1572	1723	1772	1572	1742	1885	1598	1742	1791	1598
Q Serve(g_s), s	9.5	8.5	3.7	6.1	11.5	5.5	6.3	5.8	3.0	9.2	3.0	0.6
Cycle Q Clear(g_c), s	9.5	8.5	3.7	6.1	11.5	5.5	6.3	5.8	3.0	9.2	3.0	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	574	1021	455	395	817	362	406	244	390	567	651	558
V/C Ratio(X)	0.77	0.46	0.22	0.71	0.70	0.36	0.72	0.61	0.39	0.76	0.25	0.12
Avail Cap(c_a), veh/h	1328	2277	1016	1002	1923	853	900	487	596	1327	1388	887
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.8	22.6	20.8	33.0	27.4	25.0	33.0	31.9	8.2	31.0	27.1	5.3
Incr Delay (d2), s/veh	2.2	0.3	0.2	2.4	1.1	0.6	2.4	2.5	0.6	2.1	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	3.3	1.3	2.5	4.6	2.0	2.7	2.7	1.4	3.9	1.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.0	22.9	21.1	35.4	28.5	25.6	35.4	34.4	8.9	33.1	27.3	5.3
LnGrp LOS	C	C	C	D	C	C	D	C	A	C	C	A
Approach Vol, veh/h		1013			988			594			657	
Approach Delay, s/veh		27.1			30.1			28.4			28.9	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	23.8	14.5	20.1	14.4	28.4	18.6	16.0
Change Period (Y+Rc), s	6.0	6.0	5.5	6.0	5.5	6.0	6.0	6.0
Max Green Setting (Gmax), s	30.0	42.0	20.0	30.0	22.5	50.0	29.5	20.0
Max Q Clear Time (g_c+I1), s	11.5	13.5	8.3	5.0	8.1	10.5	11.2	7.8
Green Ext Time (p_c), s	1.5	4.3	0.8	1.2	0.8	3.5	1.5	1.0

Intersection Summary	
HCM 6th Ctrl Delay	28.6
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	25	135	80	105	220	15
Future Vol, veh/h	25	135	80	105	220	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	50	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	152	90	118	247	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	554	256	264	0	-	0
Stage 1	256	-	-	-	-	-
Stage 2	298	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	493	783	1300	-	-	-
Stage 1	787	-	-	-	-	-
Stage 2	753	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	457	783	1300	-	-	-
Mov Cap-2 Maneuver	457	-	-	-	-	-
Stage 1	729	-	-	-	-	-
Stage 2	753	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.1	3.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1300	-	457	783	-	-
HCM Lane V/C Ratio	0.069	-	0.061	0.194	-	-
HCM Control Delay (s)	8	0	13.4	10.7	-	-
HCM Lane LOS	A	A	B	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.2	0.7	-	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	120	130	185	330	25
Future Vol, veh/h	5	120	130	185	330	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	50	0	200	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	135	146	208	371	28

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	885	385	399	0	-	0
Stage 1	385	-	-	-	-	-
Stage 2	500	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	315	663	1160	-	-	-
Stage 1	688	-	-	-	-	-
Stage 2	609	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	275	663	1160	-	-	-
Mov Cap-2 Maneuver	275	-	-	-	-	-
Stage 1	601	-	-	-	-	-
Stage 2	609	-	-	-	-	-

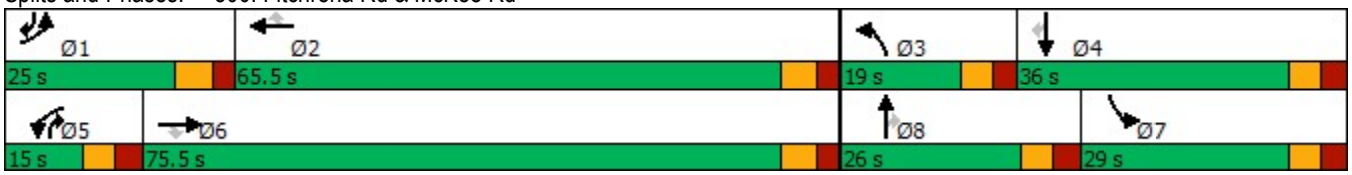
Approach	EB	NB	SB
HCM Control Delay, s	12.1	3.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1160	-	275	663	-	-
HCM Lane V/C Ratio	0.126	-	0.02	0.203	-	-
HCM Control Delay (s)	8.6	-	18.4	11.8	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0.4	-	0.1	0.8	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	880	110	65	785	120	135	100	70	260	90	100
Future Volume (vph)	90	880	110	65	785	120	135	100	70	260	90	100
Satd. Flow (prot)	1703	3406	1524	3259	3360	1495	3400	1845	1568	3335	3438	1538
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1703	3406	1524	3259	3360	1495	3400	1845	1568	3335	3438	1538
Satd. Flow (RTOR)												
Lane Group Flow (vph)	101	989	77	73	882	84	152	112	49	292	101	70
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	1	6		5	2		3	8	5	7	4	1
Permitted Phases			6			2			8			4
Total Split (s)	25.0	75.5	75.5	15.0	65.5	65.5	19.0	26.0	15.0	29.0	36.0	25.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.0	6.5	6.5	6.5	6.5	6.5
Act Effct Green (s)	12.0	43.1	43.1	7.7	35.4	35.4	10.2	12.9	20.6	15.0	18.2	37.0
Actuated g/C Ratio	0.12	0.42	0.42	0.08	0.35	0.35	0.10	0.13	0.20	0.15	0.18	0.36
v/c Ratio	0.51	0.69	0.12	0.30	0.76	0.16	0.45	0.48	0.16	0.60	0.17	0.13
Control Delay	56.0	28.3	21.1	54.6	35.0	25.7	52.0	53.7	23.0	48.9	39.8	25.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.0	28.3	21.1	54.6	35.0	25.7	52.0	53.7	23.0	48.9	39.8	25.0
LOS	E	C	C	D	D	C	D	D	C	D	D	C
Approach Delay		30.2			35.6			48.1			43.3	
Approach LOS		C			D			D			D	
Queue Length 50th (ft)	60	277	31	22	254	36	46	67	16	89	28	29
Queue Length 95th (ft)	143	416	70	58	413	86	103	154	49	171	65	74
Internal Link Dist (ft)		660			1905			794			455	
Turn Bay Length (ft)	160		120	370			220		150	300		360
Base Capacity (vph)	320	2393	1070	282	2018	898	449	366	333	764	1032	664
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.41	0.07	0.26	0.44	0.09	0.34	0.31	0.15	0.38	0.10	0.11

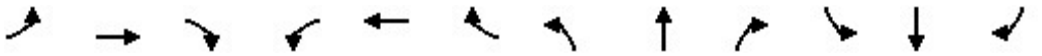
Intersection Summary	
Cycle Length: 145.5	
Actuated Cycle Length: 102.4	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 36.0	Intersection LOS: D
Intersection Capacity Utilization 59.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 500: Fitchrona Rd & McKee Rd



HCM 6th Signalized Intersection Summary
500: Fitchrona Rd & McKee Rd

05/01/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	880	110	65	785	120	135	100	70	260	90	100
Future Volume (veh/h)	90	880	110	65	785	120	135	100	70	260	90	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1791	1791	1781	1856	1856	1856	1826	1826	1826
Adj Flow Rate, veh/h	101	989	77	73	882	84	152	112	49	292	101	70
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	6	6	6	8	8	8	3	3	3	5	5	5
Cap, veh/h	130	1310	584	197	1241	551	244	228	286	399	610	389
Arrive On Green	0.08	0.38	0.38	0.06	0.36	0.36	0.07	0.12	0.12	0.12	0.18	0.18
Sat Flow, veh/h	1725	3441	1535	3309	3403	1510	3428	1856	1572	3374	3469	1547
Grp Volume(v), veh/h	101	989	77	73	882	84	152	112	49	292	101	70
Grp Sat Flow(s),veh/h/ln	1725	1721	1535	1654	1701	1510	1714	1856	1572	1687	1735	1547
Q Serve(g_s), s	4.7	20.4	2.7	1.7	18.1	1.7	3.5	4.6	1.2	6.8	2.0	2.9
Cycle Q Clear(g_c), s	4.7	20.4	2.7	1.7	18.1	1.7	3.5	4.6	1.2	6.8	2.0	2.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	130	1310	584	197	1241	551	244	228	286	399	610	389
V/C Ratio(X)	0.78	0.76	0.13	0.37	0.71	0.15	0.62	0.49	0.17	0.73	0.17	0.18
Avail Cap(c_a), veh/h	391	2912	1299	345	2463	1093	547	444	470	931	1255	677
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.0	21.9	16.5	36.9	22.2	5.5	36.8	33.4	10.6	34.7	28.5	23.9
Incr Delay (d2), s/veh	9.5	0.9	0.1	1.2	0.8	0.1	2.6	1.6	0.3	2.6	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	7.6	0.9	0.7	6.7	1.0	1.5	2.1	0.6	2.9	0.8	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.5	22.9	16.6	38.0	23.0	5.6	39.4	35.0	10.8	37.3	28.6	24.2
LnGrp LOS	D	C	B	D	C	A	D	D	B	D	C	C
Approach Vol, veh/h		1167			1039			313			463	
Approach Delay, s/veh		24.5			22.6			33.4			33.4	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.7	36.2	11.8	20.8	11.4	37.5	16.1	16.5
Change Period (Y+Rc), s	6.5	6.5	6.0	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	18.5	59.0	13.0	29.5	8.5	69.0	22.5	19.5
Max Q Clear Time (g_c+I1), s	6.7	20.1	5.5	4.9	3.7	22.4	8.8	6.6
Green Ext Time (p_c), s	0.2	7.3	0.2	0.8	0.1	8.7	0.8	0.5

Intersection Summary	
HCM 6th Ctrl Delay	26.2
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	160	1080	915	105	0	180
Future Vol, veh/h	160	1080	915	105	0	180
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	150	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	180	1213	1028	118	0	202

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1146	0	-	0	-	514
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	-	-	3.32
Pot Cap-1 Maneuver	605	-	-	-	0	505
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	605	-	-	-	-	505
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	1.7	0	16.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	605	-	-	-	505
HCM Lane V/C Ratio	0.297	-	-	-	0.4
HCM Control Delay (s)	13.4	-	-	-	16.8
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	1.2	-	-	-	1.9

Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	40	195	125	200	325	20
Future Vol, veh/h	40	195	125	200	325	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	50	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	43	212	136	217	353	22

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	853	364	375	0	-	0
Stage 1	364	-	-	-	-	-
Stage 2	489	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	330	681	1183	-	-	-
Stage 1	703	-	-	-	-	-
Stage 2	616	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	287	681	1183	-	-	-
Mov Cap-2 Maneuver	287	-	-	-	-	-
Stage 1	611	-	-	-	-	-
Stage 2	616	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.9	3.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1183	-	287	681	-	-
HCM Lane V/C Ratio	0.115	-	0.151	0.311	-	-
HCM Control Delay (s)	8.4	0	19.8	12.7	-	-
HCM Lane LOS	A	A	C	B	-	-
HCM 95th %tile Q(veh)	0.4	-	0.5	1.3	-	-

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	175	130	325	490	30
Future Vol, veh/h	5	175	130	325	490	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	50	0	200	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	190	141	353	533	33

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1185	550	566	0	-	0
Stage 1	550	-	-	-	-	-
Stage 2	635	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	209	535	1006	-	-	-
Stage 1	578	-	-	-	-	-
Stage 2	528	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	180	535	1006	-	-	-
Mov Cap-2 Maneuver	180	-	-	-	-	-
Stage 1	497	-	-	-	-	-
Stage 2	528	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.7	2.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1006	-	180	535	-	-
HCM Lane V/C Ratio	0.14	-	0.03	0.356	-	-
HCM Control Delay (s)	9.2	-	25.6	15.4	-	-
HCM Lane LOS	A	-	D	C	-	-
HCM 95th %tile Q(veh)	0.5	-	0.1	1.6	-	-

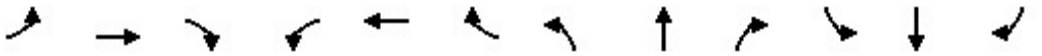
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	795	200	280	830	165	330	135	225	345	185	135
Future Volume (vph)	150	795	200	280	830	165	330	135	225	345	185	135
Satd. Flow (prot)	1770	3539	1583	3451	3558	1583	3467	1881	1599	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	3451	3558	1583	3467	1881	1599	3433	3539	1583
Satd. Flow (RTOR)												
Lane Group Flow (vph)	163	864	135	304	902	111	359	147	152	375	201	91
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	1	6		5	2		3	8	5	7	4	1
Permitted Phases			6			2			8			4
Total Split (s)	30.0	60.5	60.5	27.0	57.5	57.5	28.0	27.0	27.0	31.0	30.0	30.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.0	6.5	6.5	6.5	6.5	6.5
Act Effct Green (s)	16.2	37.6	37.6	15.6	37.0	37.0	17.3	14.8	30.5	18.2	16.2	39.2
Actuated g/C Ratio	0.14	0.33	0.33	0.14	0.33	0.33	0.15	0.13	0.27	0.16	0.14	0.35
v/c Ratio	0.65	0.74	0.26	0.64	0.78	0.21	0.68	0.60	0.35	0.68	0.40	0.17
Control Delay	61.7	38.2	30.4	55.6	40.5	30.8	55.1	61.2	21.6	54.1	49.5	29.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.7	38.2	30.4	55.6	40.5	30.8	55.1	61.2	21.6	54.1	49.5	29.0
LOS	E	D	C	E	D	C	E	E	C	D	D	C
Approach Delay		40.6			43.2			48.7			49.3	
Approach LOS		D			D			D			D	
Queue Length 50th (ft)	112	287	70	107	305	57	126	101	52	132	70	45
Queue Length 95th (ft)	224	432	141	193	471	123	224	207	113	229	131	100
Internal Link Dist (ft)		660			1905			794			455	
Turn Bay Length (ft)	160		120	370			220		150	300		360
Base Capacity (vph)	382	1757	786	650	1668	742	701	354	510	773	764	663
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.49	0.17	0.47	0.54	0.15	0.51	0.42	0.30	0.49	0.26	0.14

Intersection Summary	
Cycle Length: 145.5	
Actuated Cycle Length: 113.3	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 44.4	Intersection LOS: D
Intersection Capacity Utilization 71.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 500: Fitchrona Rd & McKee Rd

HCM 6th Signalized Intersection Summary
500: Fitchrona Rd & McKee Rd

05/01/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	795	200	280	830	165	330	135	225	345	185	135
Future Volume (veh/h)	150	795	200	280	830	165	330	135	225	345	185	135
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1880	1880	1870	1885	1885	1885	1870	1870	1870
Adj Flow Rate, veh/h	163	864	135	304	902	111	359	147	152	375	201	91
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	1	1	1	2	2	2
Cap, veh/h	203	1168	521	405	1184	525	466	217	370	486	454	383
Arrive On Green	0.11	0.33	0.33	0.12	0.33	0.33	0.13	0.12	0.12	0.14	0.13	0.13
Sat Flow, veh/h	1781	3554	1585	3474	3572	1585	3483	1885	1598	3456	3554	1585
Grp Volume(v), veh/h	163	864	135	304	902	111	359	147	152	375	201	91
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1737	1786	1585	1742	1885	1598	1728	1777	1585
Q Serve(g_s), s	7.8	18.7	5.4	7.4	19.6	2.5	8.7	6.5	3.7	9.1	4.5	4.0
Cycle Q Clear(g_c), s	7.8	18.7	5.4	7.4	19.6	2.5	8.7	6.5	3.7	9.1	4.5	4.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	203	1168	521	405	1184	525	466	217	370	486	454	383
V/C Ratio(X)	0.80	0.74	0.26	0.75	0.76	0.21	0.77	0.68	0.41	0.77	0.44	0.24
Avail Cap(c_a), veh/h	482	2208	985	819	2096	930	882	445	563	974	961	609
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.6	25.9	21.4	37.2	26.0	6.7	36.4	36.9	10.0	36.0	35.1	26.5
Incr Delay (d2), s/veh	7.3	0.9	0.3	2.8	1.0	0.2	2.7	3.7	0.7	2.6	0.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	7.5	2.0	3.2	7.9	1.5	3.7	3.1	1.7	3.9	2.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.8	26.8	21.7	40.0	27.0	6.9	39.1	40.6	10.8	38.7	35.7	26.9
LnGrp LOS	D	C	C	D	C	A	D	D	B	D	D	C
Approach Vol, veh/h		1162			1317			658			667	
Approach Delay, s/veh		28.7			28.3			32.9			36.2	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.4	35.3	17.6	17.6	16.6	35.1	18.7	16.5
Change Period (Y+Rc), s	6.5	6.5	6.0	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	23.5	51.0	22.0	23.5	20.5	54.0	24.5	20.5
Max Q Clear Time (g_c+I1), s	9.8	21.6	10.7	6.5	9.4	20.7	11.1	8.5
Green Ext Time (p_c), s	0.3	7.2	1.0	1.4	0.8	7.1	1.1	1.0

Intersection Summary	
HCM 6th Ctrl Delay	30.6
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	200	1145	1150	145	0	230
Future Vol, veh/h	200	1145	1150	145	0	230
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	150	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	217	1245	1250	158	0	250

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1408	0	-	0	-	625
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	-	-	3.32
Pot Cap-1 Maneuver	481	-	-	-	0	428
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	481	-	-	-	-	428
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	2.8	0	24.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	481	-	-	-	428
HCM Lane V/C Ratio	0.452	-	-	-	0.584
HCM Control Delay (s)	18.5	-	-	-	24.6
HCM Lane LOS	C	-	-	-	C
HCM 95th %tile Q(veh)	2.3	-	-	-	3.6

Intersection	
Int Delay, s/veh	6.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	70	230	175	140	220	25
Future Vol, veh/h	70	230	175	140	220	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	50	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	74	245	186	149	234	27

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	769	248	261	0	-	0
Stage 1	248	-	-	-	-	-
Stage 2	521	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	369	791	1303	-	-	-
Stage 1	793	-	-	-	-	-
Stage 2	596	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	311	791	1303	-	-	-
Mov Cap-2 Maneuver	311	-	-	-	-	-
Stage 1	669	-	-	-	-	-
Stage 2	596	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.6	4.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1303	-	311	791	-	-
HCM Lane V/C Ratio	0.143	-	0.239	0.309	-	-
HCM Control Delay (s)	8.2	0	20.2	11.6	-	-
HCM Lane LOS	A	A	C	B	-	-
HCM 95th %tile Q(veh)	0.5	-	0.9	1.3	-	-

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	245	195	315	410	40
Future Vol, veh/h	5	245	195	315	410	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	50	0	200	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	261	207	335	436	43

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1207	458	479	0	-	0
Stage 1	458	-	-	-	-	-
Stage 2	749	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	203	603	1083	-	-	-
Stage 1	637	-	-	-	-	-
Stage 2	467	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	164	603	1083	-	-	-
Mov Cap-2 Maneuver	164	-	-	-	-	-
Stage 1	515	-	-	-	-	-
Stage 2	467	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.6	3.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1083	-	164	603	-	-
HCM Lane V/C Ratio	0.192	-	0.032	0.432	-	-
HCM Control Delay (s)	9.1	-	27.7	15.4	-	-
HCM Lane LOS	A	-	D	C	-	-
HCM 95th %tile Q(veh)	0.7	-	0.1	2.2	-	-

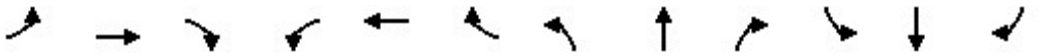
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	445	150	265	540	200	275	140	230	405	150	100
Future Volume (vph)	165	445	150	265	540	200	275	140	230	405	150	100
Satd. Flow (prot)	1752	3505	1568	3418	3523	1568	3467	1881	1599	3467	3574	1599
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1752	3505	1568	3418	3523	1568	3467	1881	1599	3467	3574	1599
Satd. Flow (RTOR)												
Lane Group Flow (vph)	176	473	99	282	574	132	293	149	152	431	160	66
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	1	6		5	2		3	8	5	7	4	1
Permitted Phases			6			2			8			4
Total Split (s)	31.0	54.0	54.0	28.0	51.0	51.0	27.5	28.5	28.0	35.0	36.0	31.0
Total Lost Time (s)	6.0	6.0	6.0	5.5	6.0	6.0	5.5	6.0	5.5	6.0	6.0	6.0
Act Effct Green (s)	16.0	25.8	25.8	14.3	23.5	23.5	14.4	14.4	29.1	18.4	18.9	41.2
Actuated g/C Ratio	0.16	0.26	0.26	0.15	0.24	0.24	0.15	0.15	0.30	0.19	0.19	0.42
v/c Ratio	0.61	0.51	0.24	0.57	0.68	0.35	0.57	0.54	0.32	0.66	0.23	0.10
Control Delay	50.5	33.4	31.9	46.2	39.3	36.2	46.1	50.1	16.6	43.9	37.0	19.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.5	33.4	31.9	46.2	39.3	36.2	46.1	50.1	16.6	43.9	37.0	19.3
LOS	D	C	C	D	D	D	D	D	B	D	D	B
Approach Delay		37.2			40.8			39.6			39.8	
Approach LOS		D			D			D			D	
Queue Length 50th (ft)	98	125	46	81	163	65	85	84	36	123	43	23
Queue Length 95th (ft)	215	224	111	162	291	151	168	190	86	231	93	62
Internal Link Dist (ft)		660			1905			794			455	
Turn Bay Length (ft)	160		120	370			220		150	300		360
Base Capacity (vph)	471	1810	810	827	1706	759	821	455	631	1082	1154	843
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.26	0.12	0.34	0.34	0.17	0.36	0.33	0.24	0.40	0.14	0.08

Intersection Summary		
Cycle Length: 145.5		
Actuated Cycle Length: 97.5		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.68		
Intersection Signal Delay: 39.4	Intersection LOS: D	
Intersection Capacity Utilization 63.9%	ICU Level of Service B	
Analysis Period (min) 15		

Splits and Phases: 500: Fitchrona Rd & McKee Rd

HCM 6th Signalized Intersection Summary
500: Fitchrona Rd & McKee Rd

05/01/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	445	150	265	540	200	275	140	230	405	150	100
Future Volume (veh/h)	165	445	150	265	540	200	275	140	230	405	150	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1865	1865	1856	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	176	473	99	282	574	132	293	149	152	431	160	66
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	1	1	1	1	1	1
Cap, veh/h	223	890	397	404	838	372	417	262	409	578	686	508
Arrive On Green	0.13	0.25	0.25	0.12	0.24	0.24	0.12	0.14	0.14	0.17	0.19	0.19
Sat Flow, veh/h	1767	3526	1572	3446	3544	1572	3483	1885	1598	3483	3582	1598
Grp Volume(v), veh/h	176	473	99	282	574	132	293	149	152	431	160	66
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1723	1772	1572	1742	1885	1598	1742	1791	1598
Q Serve(g_s), s	7.0	8.4	3.6	5.7	10.6	2.8	5.8	5.3	2.5	8.5	2.7	2.1
Cycle Q Clear(g_c), s	7.0	8.4	3.6	5.7	10.6	2.8	5.8	5.3	2.5	8.5	2.7	2.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	223	890	397	404	838	372	417	262	409	578	686	508
V/C Ratio(X)	0.79	0.53	0.25	0.70	0.68	0.35	0.70	0.57	0.37	0.75	0.23	0.13
Avail Cap(c_a), veh/h	613	2347	1047	1076	2212	982	1063	588	686	1401	1491	866
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.6	23.3	21.5	30.6	25.1	7.3	30.5	29.0	7.0	28.6	24.7	17.5
Incr Delay (d2), s/veh	6.2	0.5	0.3	2.2	1.0	0.6	2.2	2.0	0.6	1.9	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	3.2	1.3	2.3	4.2	1.7	2.4	2.4	1.1	3.6	1.1	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.7	23.8	21.8	32.8	26.1	7.9	32.6	31.0	7.5	30.6	24.8	17.6
LnGrp LOS	D	C	C	C	C	A	C	C	A	C	C	B
Approach Vol, veh/h		748			988			594			657	
Approach Delay, s/veh		26.6			25.6			25.8			27.9	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.1	23.0	14.1	19.8	13.9	24.2	18.0	16.0
Change Period (Y+Rc), s	6.0	6.0	5.5	6.0	5.5	6.0	6.0	6.0
Max Green Setting (Gmax), s	25.0	45.0	22.0	30.0	22.5	48.0	29.0	22.5
Max Q Clear Time (g_c+I1), s	9.0	12.6	7.8	4.7	7.7	10.4	10.5	7.3
Green Ext Time (p_c), s	0.4	4.4	0.8	1.2	0.8	3.5	1.5	1.1

Intersection Summary	
HCM 6th Ctrl Delay	26.4
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	250	760	740	175	0	290
Future Vol, veh/h	250	760	740	175	0	290
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	150	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	272	826	804	190	0	315

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	994	0	-	0	-	402
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	-	-	3.32
Pot Cap-1 Maneuver	692	-	-	-	0	598
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	692	-	-	-	-	598
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	3.3	0	17.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	692	-	-	-	598
HCM Lane V/C Ratio	0.393	-	-	-	0.527
HCM Control Delay (s)	13.5	-	-	-	17.5
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	1.9	-	-	-	3.1

PART OF THE SOUTHWEST 1/4 OF SECTION 6, TOWNSHIP 6 NORTH, RANGE 9 EAST, IN THE CITY OF FITCHBURG, DANE COUNTY, WISCONSIN, WHICH IS BOUNDED AND DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHWEST CORNER OF SAID SOUTHWEST 1/4; THENCE N00°54'30"E ALONG THE WEST LINE OF SAID SOUTHWEST 1/4 60.00 FEET TO THE POINT OF BEGINNING OF LANDS DESCRIBED HEREINAFTER; THENCE N00°54'30"E ALONG SAID WEST LINE 1260.95 FEET TO A POINT IN THE SOUTH LINE OF FOURTH ADDITION TO JAMESTOWN; THENCE S88°14'32"E ALONG SAID SOUTH LINE 1185.15 FEET TO A POINT; THENCE N00°59'08"E ALONG SAID SOUTH LINE 108.79 FEET TO A POINT; THENCE S88°02'32"E ALONG SAID SOUTH LINE 959.76 FEET TO A POINT; THENCE S00°07'28"W 287.03 FEET TO A POINT ON THE NORTH LINE OF FITCHRONA ROAD; THENCE S88°29'33"W ALONG SAID NORTH LINE 162.53 FEET TO A POINT; THENCE N87°57'47"W ALONG SAID NORTH LINE 773.45 FEET TO A POINT OF CURVATURE; THENCE SOUTHWESTERLY 581.50 FEET ALONG SAID NORTH LINE AND ARC OF A CURVE, WHOSE CENTER LIES TO THE SOUTHEAST, WHOSE RADIUS IS 363.00 FEET, AND WHOSE CHORD BEARS S46°08'43"W 521.29 FEET TO A POINT; THENCE S00°15'07"W ALONG SAID NORTH LINE 155.82 FEET TO A POINT; THENCE S05°14'28"W ALONG SAID NORTH LINE 138.07 FEET TO A POINT; THENCE S00°15'12"W ALONG SAID NORTH LINE 352.02 FEET TO A POINT; THENCE S13°52'50"W ALONG SAID NORTH LINE 18.08 FEET TO POINT "A" ON THE NORTH LINE OF MCKEE ROAD "CTH PD"; THENCE S89°03'48"W ALONG SAID NORTH LINE 271.64 FEET TO A POINT; THENCE N88°12'32"W ALONG SAID NORTH LINE 255.12 FEET TO A POINT; THENCE S89°47'50"W ALONG SAID NORTH LINE 209.06 FEET TO A POINT; THENCE S81°09'39"W ALONG SAID NORTH LINE 100.03 FEET TO THE POINT OF BEGINNING.

SAID DESCRIBED PARCEL OF LAND CONTAINS 1,149,920 SQUARE FEET OR 32.596 ACRES.

Proposed Rezoning
RE: Jamestown Quarry Development

Fitchburg Partners, LLC is hereby requesting a rezoning of 32.596 acres of the parcel addressed as 2975 Kapec Road from a Rural Development Zoning District (R-D) to Planned Development Zoning District – General Implementation Plan (PDD-GIP).

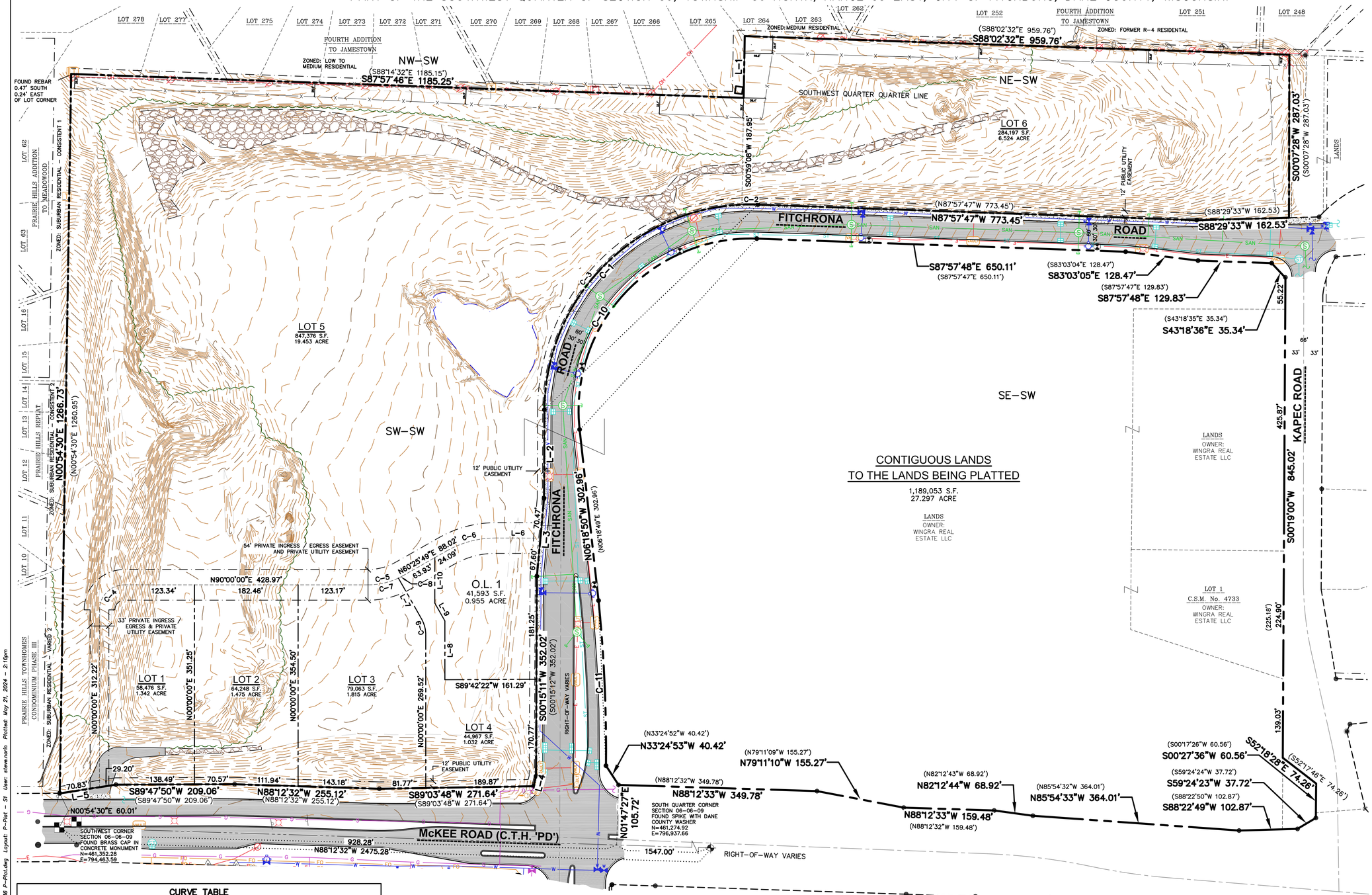
This rezoning application is accompanied by an application for land division that proposes subdividing the property into seven (7) parcels, 6 of which are intended for commercial and residential development. Private utility mains, service laterals, access drives, and stormwater basins will be constructed in order to serve the various developments within the overall site.

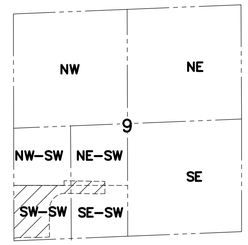
A Public Information Meeting was held on April 18th, 2024 at the park shelter in Huegel Jamestown Park regarding the proposed land division and rezoning of lands formerly used by the Wingra Stone quarry operations. The meeting was well attended with approximately 20-30 area residents present along with the development team and representatives from the City of Fitchburg. Overall, those in attendance were in support of the proposed development and voiced their desire to see the entirety of the Wingra Stone site redeveloped.

This proposal to rezone the property and its subdivided parcels is consistent with the City's Comprehensive Plan and the City's Anton Drive Redevelopment Plan.

PRELIMINARY PLAT OF JAMESTOWN QUARRY

PART OF THE SOUTHWEST QUARTER OF SECTION 06, TOWNSHIP 06 NORTH, RANGE 09 EAST, CITY OF FITCHBURG, DANE COUNTY, WISCONSIN.





LOCATION MAP
NOT TO SCALE

LOT SUMMARY TABLE

LOT	TYPE	ACREAGE
LOT 1	COMMERCIAL	1.342
LOT 2	COMMERCIAL	1.475
LOT 3	COMMERCIAL	1.815
LOT 4	COMMERCIAL	1.032
LOT 5	MULTI FAMILY	19.453
LOT 6	MULTI FAMILY	6.524
OUTLOT 1	STORMWATER	0.955

LEGEND

- GOVERNMENT CORNER
- 1" IRON PIPE FOUND
- ¾" REBAR FOUND
- 3/4" x 24" REBAR SET (1.50 LBS/LF)
- BENCHMARK
- SIGN
- SANITARY MANHOLE
- HYDRANT
- WATER VALVE
- STORM MANHOLE
- CURB INLET
- LIGHT POLE
- POWER POLE W/GUY
- VAULT
- TELEPHONE PEDESTAL
- PARCEL BOUNDARY
- SECTION LINE
- RIGHT-OF-WAY LINE
- CENTERLINE
- CHORD LINE
- PLATTED LOT LINE
- EASEMENT LINE
- LANDSCAPE LIMITS
- FENCE LINE
- EDGE OF WATER
- CONCRETE CURB & GUTTER
- EDGE OF GRAVEL
- SANITARY SEWER
- WATER LINE
- STORM SEWER
- NATURAL GAS
- UNDERGROUND ELECTRIC
- EDGE OF WOODS OR BRUSH
- 875 INDEX CONTOUR
- 874 INTERMEDIATE CONTOUR
- BITUMINOUS PAVEMENT
- RETAINING WALL
- CONCRETE PAVEMENT
- GRAVEL
- END OF FLAGGED UTILITIES
- ( ) DENOTES RECORD DATA DEPICTING THE SAME LINE ON THE GROUND AS RETRACED BY THIS SURVEY

north
0 50 100 200
SCALE: 1"=100'

CURVE TABLE

CURVE	RADIUS	DELTA	CHORD BEARING	CHORD	ARC LENGTH	TANGENT IN	TANGENT OUT
C-1	363.00'	87°19'29"	S43°54'56"W	501.24'	553.25'	S87°34'41"W	S00°15'11"W
C-2	363.00'	4°27'34"	S89°48'28"W	28.25'	28.25'	N87°57'45"W	S87°34'41"W
C-3	363.00'	87°19'29"	S43°54'56"W	501.24'	553.25'	S87°34'41"W	S00°15'11"W
C-4	44.00'	90°00'00"	S45°00'00"W	62.23'	69.12'	N90°00'00"W	S00°00'00"E
C-5	125.60'	29°34'11"	N75°12'54"E	64.10'	64.82'	N90°00'00"E	N60°25'49"E
C-6	174.40'	29°41'06"	S75°16'22"W	89.35'	90.36'	N89°53'05"W	S60°25'49"W
C-7	125.60'	25°11'31"	N77°24'14"E	54.78'	55.22'	N90°00'00"E	N64°48'29"E
C-8	125.60'	4°22'40"	N62°37'09"E	9.59'	9.60'	N64°48'29"E	N60°25'49"E
C-9	57.00'	29°34'11"	N14°47'06"W	29.09'	29.42'	N00°00'00"E	N29°34'11"W
C-10	303.00'	98°21'04"	N42°51'41"E	458.57'	520.11'	S87°57'47"E	N06°18'51"W
C-11	2530.00'	6°35'36"	N02°33'30"W	290.98'	291.14'	N05°51'18"W	N00°44'18"E

LINE TABLE

LINE	BEARING	DISTANCE
L-1	N0°59'08"E	108.79'
L-2	S0°15'07"W	155.82'
L-3	S5°14'28"W	138.07'
L-4	S13°52'48"W	18.09'
L-5	S81°10'07"W	100.03'
L-6	S89°53'05"E	78.67'
L-7	N29°34'11"W	82.71'
L-8	N0°00'00"E	103.56'
L-9	N29°34'11"W	36.00'
L-10	N0°00'00"E	80.07'

NOTES

1. FIELD WORK PERFORMED ON JUNE 21–24, AND JULY 06, 2022 AND SEPTEMBER 15, 2023.
2. BEARINGS FOR THIS SURVEY AND MAP ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, DANE COUNTY. THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SECTION 06-06-09, RECORDED AS S88°12'32"E.
3. ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). BENCHMARK IS A BRASS CAP IN CONCRETE MONUMENT MARKING THE SOUTHWEST CORNER OF SECTION 06, T06N, R09E, ELEVATION = 1058.3'
4. CONTOUR INTERVAL IS ONE FOOT.
5. SUBSURFACE UTILITIES AND FEATURES SHOWN ON THIS MAP HAVE BEEN APPROXIMATED BY LOCATING SURFICIAL FEATURES AND APPURTENANCES, LOCATING DIGGERS HOTLINE FIELD MARKINGS AND BY REFERENCE TO UTILITY RECORDS AND MAPS. DIGGER'S HOTLINE TICKET No. 20222426576, WITH A CLEAR DATE OF JUNE 15, 2022.
6. UTILITY COMPANIES CONTACTED THRU DIGGERS HOTLINE:
   CITY OF FITCHBURG, AT&T DISTRIBUTION, MGE (ELECTRIC AND GAS), CHARTER COMMUNICATIONS, WISCONSIN DOT–ITS EQUIPMENT
   ALLIANT ENERGY (ELECTRIC AND GAS), CITY OF MADISON ENGINEERING, MCI.
7. "COUNTY TRUNK HIGHWAY "PD" IS A CONTROLLED ACCESS HIGHWAY PURSUANT TO CHAPTER 79, DANE COUNTY CODE OF ORDINANCES".

SURVEYED FOR:
COLBURN HUNDLEY, INC,
80 OTTAWA AVENUE, NW STE 410
GRAND RAPIDS, MI 49503
(616) 742-5200

SURVEYED BY:
JSD PROFESSIONAL SERVICES, INC.
507 WEST VERONA AVENUE, SUITE 500
VERONA, WISCONSIN 53593
(608) 848-5060

WISCONSIN TODD J. BUHR S-2614 DEFOREST, WI LAND SURVEYOR

PROJECT LOCATION:
SECTION 06, TOWNSHIP 06 NORTH, RANGE 09 EAST, CITY OF FITCHBURG, DANE COUNTY, WISCONSIN.

JSD CREATE THE VISION TELL THE STORY jsdinc.com

PRELIMINARY PLAT OF JAMESTOWN QUARRY

PROJECT NO: 22-11636	DRAWN BY: CMD	INITIAL SUBMITTAL DATE: 04-23-2024 (CDP SUBMITTAL)	
FIELDBOOK/PG: –	SURVEYED BY: CMD	REVISION RESUBMITTAL DATE: 05-09-24 (CDP)	
		REVISION RESUBMITTAL DATE: –	
		REVISION RESUBMITTAL DATE: –	

DRAFT

File: \\JSDINC\projects2\2022\2211636\DWG\Survey Sheets\2211636 P-Plat.dwg Layout: P-Plat - S1 User: steve.north Plotted: May 21, 2024 - 2:16pm

PRELIMINARY PLAT OF JAMESTOWN QUARRY

PART OF THE SOUTHWEST QUARTER OF SECTION 06, TOWNSHIP 06 NORTH, RANGE 09 EAST, CITY OF FITCHBURG, DANE COUNTY, WISCONSIN.

SURVEYOR'S CERTIFICATE

I, TODD BUHR, WISCONSIN PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF CHAPTER 236 OF THE WISCONSIN STATE STATUTES AND THE LAND DIVISION AND SUBDIVISION REGULATION OF FITCHBURG CODE OF ORDINANCES, AND BY THE DIRECTION OF COLBURN HUNDLEY, INC. I HAVE SURVEYED, DIVIDED AND MAPPED THE PLAT OF JAMESTOWN QUARRY IN THE FITCHBURG, DANE COUNTY, WISCONSIN, AND THAT SUCH PLAT IS A CORRECT REPRESENTATION OF THE EXTERIOR BOUNDARIES OF THE LANDS SURVEYED AND THE DIVISION THEREOF, DESCRIBED AS FOLLOWS:

PART OF THE SOUTHWEST 1/4 OF SECTION 6, TOWNSHIP 6 NORTH, RANGE 9 EAST, IN THE CITY OF FITCHBURG, DANE COUNTY, WISCONSIN, WHICH IS BOUNDED AND DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHWEST CORNER OF SAID SOUTHWEST 1/4; THENCE N00°54'30"E ALONG THE WEST LINE OF SAID SOUTHWEST 1/4 60.00 FEET TO THE POINT OF BEGINNING OF LANDS DESCRIBED HEREINAFTER; THENCE N00°54'30"E ALONG SAID WEST LINE 1260.95 FEET TO A POINT IN THE SOUTH LINE OF FOURTH ADDITION TO JAMESTOWN; THENCE S88°14'32"E ALONG SAID SOUTH LINE 1185.15 FEET TO A POINT; THENCE N00°59'08"E ALONG SAID SOUTH LINE 108.79 FEET TO A POINT; THENCE S88°02'32"E ALONG SAID SOUTH LINE 959.76 FEET TO A POINT; THENCE S00°07'28"W 287.03 FEET TO A POINT ON THE NORTH LINE OF FITCHRONA ROAD; THENCE S88°29'33"W ALONG SAID NORTH LINE 162.53 FEET TO A POINT; THENCE N87°57'47"W ALONG SAID NORTH LINE 773.45 FEET TO A POINT OF CURVATURE; THENCE SOUTHWESTERLY 581.50 FEET ALONG SAID NORTH LINE AND ARC OF A CURVE, WHOSE CENTER LIES TO THE SOUTHEAST, WHOSE RADIUS IS 363.00 FEET, AND WHOSE CHORD BEARS S46°08'43"W 521.29 FEET TO A POINT; THENCE S00°15'07"W ALONG SAID NORTH LINE 155.82 FEET TO A POINT; THENCE S05°14'28"W ALONG SAID NORTH LINE 138.07 FEET TO A POINT; THENCE S00°15'12"W ALONG SAID NORTH LINE 352.02 FEET TO A POINT; THENCE S13°52'50"W ALONG SAID NORTH LINE 18.08 FEET TO POINT "A" ON THE NORTH LINE OF MCKEE ROAD "CTH PD"; THENCE S89°03'48"W ALONG SAID NORTH LINE 271.64 FEET TO A POINT; THENCE N88°12'32"W ALONG SAID NORTH LINE 255.12 FEET TO A POINT; THENCE S89°47'50"W ALONG SAID NORTH LINE 209.06 FEET TO A POINT; THENCE S81°09'39"W ALONG SAID NORTH LINE 100.03 FEET TO THE POINT OF BEGINNING.

SAID DESCRIBED PARCEL OF LAND CONTAINS 1,149,920 SQUARE FEET OR 32.596 ACRES.

CONTIGUOUS LANDS TO THE LANDS BEING PLATTED:

PART OF THE SOUTHWEST 1/4 OF SECTION 6, TOWNSHIP 6 NORTH, RANGE 9 EAST, IN THE CITY OF FITCHBURG, DANE COUNTY, WISCONSIN, WHICH IS BOUNDED AND DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHWEST CORNER OF SAID SOUTHWEST 1/4; THENCE N88°12'32"E ALONG THE SOUTH LINE OF SAID SOUTHWEST 1/4 928.28 FEE; THENCE N01°47'27"E 105.72 FEET TO THE POINT OF BEGINNING OF LANDS DESCRIBED HEREINAFTER; THENCE N33°24'53"W 40.42 FEET, TO A POINT OF CURVATURE; THENCE NORTHWESTERLY 291.14 FEET ALONG SAID ARC OF A CURVE, WHOSE CENTER LIES TO THE SOUTHWEST, WHOSE RADIUS IS 2535.00 FEET, AND WHOSE CHORD BEARS N02°33'33"W 290.98 FEET TO A POINT; THENCE N06°18'50"W 302.96 FEET TO A POINT OF CURVATURE; THENCE NORTHEASTERLY 458.57 FEET ALONG SAID ARC OF A CURVE, WHOSE CENTER LIES TO THE SOUTHEAST, WHOSE RADIUS IS 303.00 FEET, AND WHOSE CHORD BEARS N02°33'33"E 290.98 FEET; THENCE S87°57'48"E 650.11'; THENCE S83°03'05"E 128.47'; THENCE S87°57'48"E 129.83'; THENCE S43°18'36"E 35.34'; THENCE S00°19'00"W 845.02'; THENCE S52°18'28"E 74.26'; THENCE S00°27'36"W 60.56'; THENCE S59°24'23"W 37.72'; THENCE S88°22'49"W 102.87'; THENCE N85°54'33"W 364.01'; THENCE N82°12'44"W 68.92'; THENCE N88°12'33"W 159.48'; THENCE N79°11'10"W 155.27'; THENCE N88°12'33"W 349.78' TO THE POINT OF BEGINNING.

SAID PARCEL OF LAND CONTAINS 1,189,053 SQUARE FEET OR 27.297 ACRES.

WISCONSIN
TODD J. BUHR
S-2614
DEFOREST, WI
LAND SURVEYOR

TODD J. BUHR, S-2614 DATE
PROFESSIONAL LAND SURVEYOR

BENCHMARKS		
BENCH MARK	ELEVATION	DESCRIPTION
BM-1	1036.54	BURY BOLT ON HYDRANT EAST OF INLET 22
BM-2	1052.66	BURY BOLT ON HYDRANT WEST OF INLET 20
BM-3	1063.46	BURY BOLT ON HYDRANT NORTHEAST OF INLET 17
BM-4	1062.07	BURY BOLT ON HYDRANT NORTH OF INLET 13
BM-5	1059.28	BURY BOLT ON HYDRANT SOUTH OF INLET 10

*JSD DOES NOT GUARANTEE THAT THE BENCHMARK ELEVATIONS LISTED ON THIS MAP HAVE NOT BEEN DISTURBED SINCE THE DATE OF THIS SURVEY AND SHOULD BE VERIFIED PRIOR TO CONSTRUCTION ACTIVITIES.

north

SCALE IN FEET
60' 0 60'
SCALE 1" = 60'

PROJECT LOCATION:
SECTION 06, TOWNSHIP 06 NORTH, RANGE 09 EAST, CITY OF FITCHBURG, DANE COUNTY, WISCONSIN.

JSD CREATE THE VISION TELL THE STORY
jsdinc.com

PRELIMINARY PLAT OF JAMESTOWN QUARRY

PROJECT NO: 22-11636 DRAWN BY: CMD
FIELDBOOK/PG: – SURVEYED BY: CMD

INITIAL SUBMITTAL DATE: 04-23-2024 (CDP SUBMITTAL)
REVISION RESUBMITTAL DATE: 05-09-24 (CDP)
REVISION RESUBMITTAL DATE: –
REVISION RESUBMITTAL DATE: –

SHEET 2 OF 3

DRAFT

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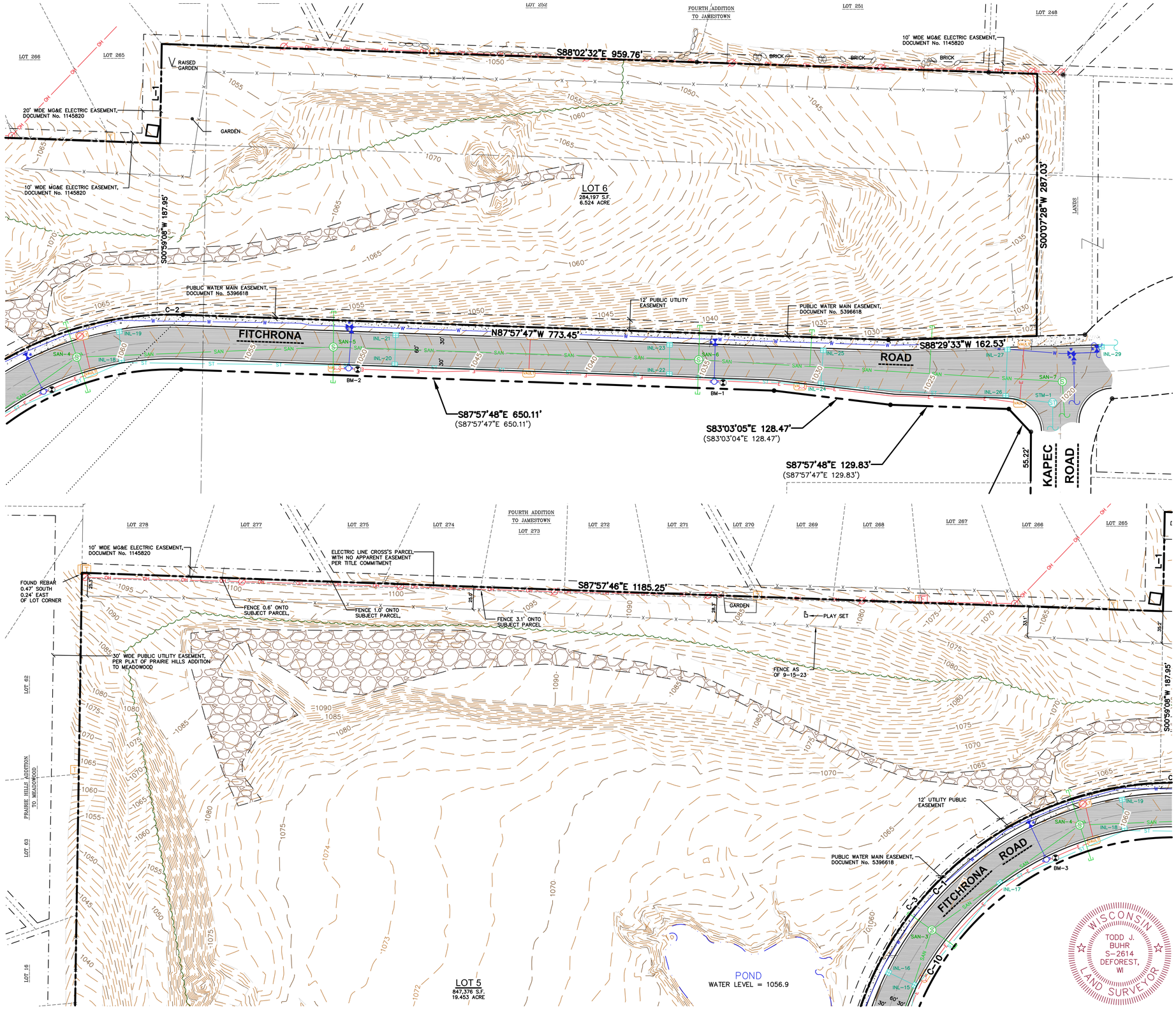
PRELIMINARY PLAT OF JAMESTOWN QUARRY

PART OF THE SOUTHWEST QUARTER OF SECTION 06, TOWNSHIP 06 NORTH, RANGE 09 EAST, CITY OF FITCHBURG, DANE COUNTY, WISCONSIN.

SCALE IN FEET
60' 0 60'
SCALE 1" = 60'

north



STORM SEWER INLETS

INLET ID	RIM ELEVATION	INVERT	ELEVATION	PIPE SIZE	PIPE TYPE
INL-1	1055.06	N	1051.36	12"	RCP
INL-2	1055.00	S	1050.90	12"	RCP
		W	1051.02	12"	RCP
INL-3	1055.19	E	1050.84	12"	RCP
		N	1050.79	24"	RCP
INL-4	1055.29	S	1050.39	24"	RCP
		W	1050.40	18"	RCP
		N	1050.24	24"	RCP
INL-5	1056.88	N	1051.98	12"	RCP
INL-6	1056.24	S	1051.29	12"	RCP
INL-7	1056.28	N	1051.29	12"	RCP
		S	1051.31	12"	RCP
		E	1051.22	18"	RCP
INL-8	1056.26	S	1050.86	12"	RCP
INL-9	1056.19	W	1050.62	18"	RCP
		N	1050.81	12"	RCP
		E	1050.58	24"	RCP
INL-10	1057.08	W	1052.23	12"	RCP
INL-11	1057.58	E	1053.45	12"	RCP
INL-12	1057.46	S	1049.46	24"	RCP
		E	1052.56	12"	RCP
		W	1052.71	12	RCP
		N	1049.41	24"	RCP
INL-13	1059.23	S	1048.52	24"	RCP
		W	1055.03	12"	RCP
		NE	1048.49	24"	RCP
INL-14	1059.26	W	1055.56	12"	RCP
INL-15	1060.01	SW	1048.07	24"	RCP
		NW	1055.85	12"	RCP
		NE	1048.02	24"	RCP
INL-16	1060.04	SE	1056.31	12"	RCP
INL-17	1060.91	SW	1047.71	24"	RCP
		NE	1047.70	24"	RCP
INL-18	1059.73	SW	1047.16	24"	RCP
		N	1055.25	12"	RCP
		E	1047.14	24"	RCP
INL-19	1059.60	S	1055.73	12"	RCP
INL-20	1048.26	W	1041.84	24"	RCP
		N	1043.51	12"	RCP
		E	1041.81	24"	RCP
INL-21	1048.24	S	1044.48	12"	RCP
INL-22	1036.18	W	1030.53	24"	RCP
		N	1031.74	12"	RCP
		E	1030.50	24"	RCP
INL-23	1036.20	S	1032.65	12"	RCP
INL-24	1029.46	W	1024.01	24"	RCP
		N	1024.96	12"	RCP
		E	1023.96	24"	RCP
INL-25	1029.40	S	1025.63	12"	RCP
INL-26	1021.81	W	1016.46	24"	RCP
		N	1017.39	12"	RCP
		E	1016.43	24"	RCP
INL-27	1022.17	S	1018.10	12"	RCP
INL-28	1019.61	E	1015.06	12"	RCP
INL-29	1062.56	W	1059.06	12"	RCP

STORM SEWER MANHOLES

STRUCT. ID	RIM ELEVATION	INVERT	ELEVATION	PIPE SIZE	PIPE TYPE
STM-1	1020.23	W	1013.95	24"	RCP
		S	1013.93	27"	RCP

SANITARY SEWER MANHOLES

STRUCT. ID	RIM ELEVATION	INVERT	ELEVATION	PIPE SIZE	PIPE TYPE
SAN-1	1057.71	SE	1041.71	8"	PVC
		SW	1041.66	8"	PVC
		N	1041.68	8"	PVC
SAN-2	1059.63	S	1039.74	8"	PVC
		E	1039.87	8"	PVC
		W	1039.80	8"	PVC
		NE	1039.70	8"	PVC
SAN-3	1060.80	SW	1038.86	8"	PVC
		E	1038.93	8"	PVC
		W	1039.00	8"	PVC
		NE	1038.84	8"	PVC
SAN-4	1061.01	SW	1038.03	8"	PVC
		SE	1038.05	8"	PVC
		NW	1038.03	8"	PVC
		E	1037.89	8"	PVC
SAN-5	1051.37	W	1036.67	8"	PVC
		S	1036.78	8"	PVC
		N	1036.87	8"	PVC
		E	1036.67	10"	PVC
SAN-6	1035.34	W	1023.29	10"	PVC
		S	1023.32	10"	PVC
		N	1023.39	10"	PVC
		E	1023.25	10"	PVC
SAN-7	1020.58	W	1010.71	10"	PVC
		N	1010.57	8"	PVC
		S	1010.57	10"	PVC

WISCONSIN
TODD J. BUHR
S-2614
DEFOREST, WI
LAND SURVEYOR

PROJECT LOCATION:
SECTION 06, TOWNSHIP 06 NORTH, RANGE 09 EAST, CITY OF FITCHBURG, DANE COUNTY, WISCONSIN.

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PRELIMINARY PLAT OF JAMESTOWN QUARRY

PROJECT NO: 22-11636 | DRAWN BY: CMD | INITIAL SUBMITTAL DATE: 04-23-2024 (CDP SUBMITTAL)
FIELDBOOK/PG: — | SURVEYED BY: CMD | REVISION RESUBMITTAL DATE: 05-09-24 (CDP)
REVISION RESUBMITTAL DATE: —
REVISION RESUBMITTAL DATE: —

SHEET 3 OF 3

DRAFT

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Madison Regional Office
507 W. Verona Ave, Suite 500
Verona, WI 53593
608.848.5060

May 3, 2024

City of Fitchburg
Re: Existing Tree Survey and Field Visit
JSD Project # 22-11636

To Whom It May Concern,

I completed a field visit on Thursday, April 25, 2024 to perform a general inventory of existing trees on the property located at 2975 Kapec Road (parcel 060906399202). The purpose was to collect information about the site's desirable tree population as it relates to the City of Fitchburg's Tree Preservation Plan requirement as described in Section 24.4(g) of the City's municipal code.

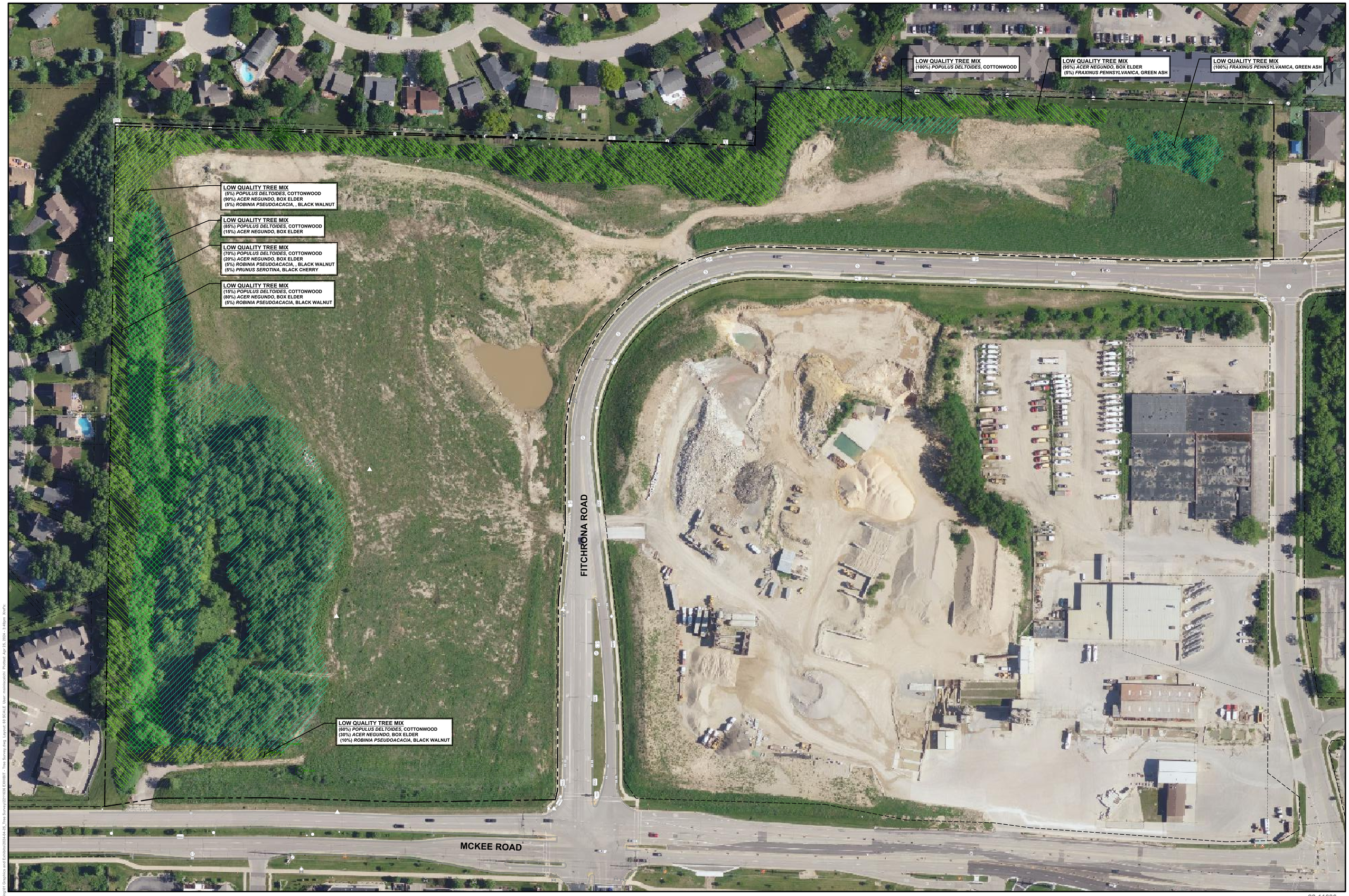
I have reviewed the City of Fitchburg's definition of "desirable trees" and I hereby attest there are zero desirable trees located on this parcel, as the majority of trees observed are invasive and typical of disturbed areas. The trees that were observed and assessed on the site do not meet the definition of "desirable trees" that require preservation within the City of Fitchburg's Municipal Code. As such, I do not believe preservation measures are warranted for the trees surveyed on this site.

Please reference the attached exhibit for an estimated percentage of tree species by generalized area.

Please contact me with any questions.

Respectfully,

Michael Siniscalchi
Senior Landscape Designer, ASLA, MLA



22-11636

2975 KAPEC ROAD

FITCHBURG, WI

4/25/2024

EXISTING TREE INVENTORY

NORTH

0 60' 120'

JSD

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JAMESTOWN QUARRY

CITY OF FITCHBURG, DANE COUNTY, WISCONSIN

SE 1/4, SW 1/4, SECTION 06, TOWNSHIP 6 NORTH, RANGE 9 EAST

DRAWING INDEX

C0.0	TITLE SHEET
1 OF 2	ALTA/NSPS LAND TITLE SURVEY
2 OF 2	ALTA/NSPS LAND TITLE SURVEY
C1.0	NOTES
C1.1	NOTES AND LEGEND
C2.0	DEMOLITION PLAN
C3.0	SITE PLAN
C4.0	GRADING AND EROSION CONTROL PLAN
C5.0	UTILITY PLAN
C6.0	STREET PLAN AND PROFILE
C6.1	STREET PLAN AND PROFILE
C7.0	DETAILS - TYPICAL SECTIONS
C7.1	DETAILS
C7.2	DETAILS
C7.3	DETAILS

PROJECT AREA

NOT TO SCALE

north

JSD

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jsdinc.com

MADISON REGIONAL OFFICE
507 WEST VERONA AVENUE, SUITE 500
VERONA, WISCONSIN 53593
P. 608.848.5060

CLIENT:
FITCHBURG PARTNERS, LLC.

CLIENT ADDRESS:
80 OTTAWA AVE. NW, SUITE 410
GRAND RAPIDS, MI 49503

PROJECT:
JAMESTOWN QUARRY

PROJECT LOCATION:
2975 KAPEC ROAD
DANE COUNTY
FITCHBURG, WI 53719

PLAN MODIFICATIONS:

#	Date:	Description:
1	05.21.24	PRELIMINARY PLAT
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		

Designed By: MSS
Reviewed By:
Approved By: CD

SHEET TITLE:
TITLE SHEET

SHEET NUMBER:
C0.0

JSD PROJECT NO: 22-11636

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GENERAL NOTES

1. REFER TO THE EXISTING CONDITIONS SURVEY FOR EXISTING CONDITIONS NOTES AND LEGENDS.
2. ALL WORK IN THE RIGHT-OF-WAY AND/OR PUBLIC EASEMENTS SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, JURISDICTIONAL SPECIFICATIONS, AND APPROVED BY THE JURISDICTION HAVING AUTHORITY.
3. EXISTING GRADE SPOT ELEVATIONS SHOWN FOR INFORMATIONAL PURPOSES. DURING CONSTRUCTION MATCH EXISTING GRADES AT CONSTRUCTION LIMITS.
4. NO SITE GRADING OUTSIDE OR DOWNSLOPE OF PROPOSED SILT FENCE LOCATION. NO LAND DISTURBANCE BEYOND PROPERTY LINES.
5. JSD SHALL BE HELD HARMLESS AND DOES NOT WARRANT ANY DEVIATIONS BY THE OWNER/CONTRACTOR FROM THE APPROVED CONSTRUCTION PLANS THAT MAY RESULT IN DISCIPLINARY ACTIONS BY ANY OR ALL REGULATORY AGENCIES.
6. CONTRACTOR SHALL RESTORE ALL BUILDINGS, PAVEMENT, PIPES, SLOPES, AND STRUCTURES DAMAGED BY THE CONTRACTOR TO PRE-EXISTING OR BETTER CONDITIONS.
7. THE RIGHT-OF-WAY IS THE SOLE JURISDICTION OF THE JURISDICTIONAL AUTHORITY AND IS SUBJECT TO CHANGE AT ANY TIME.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY DURING THE CONSTRUCTION OF THESE IMPROVEMENTS.
9. ANY REFERENCES TO THE TERMS OR ENTITY ABBREVIATIONS IN THE FOLLOWING NOTES AND SPECIFICATIONS SHALL BE UNDERSTOOD AS FOLLOWS:

9.1. "JURISDICTION " - THE LOCAL GOVERNMENTAL AGENCY (I.E., CITY, VILLAGE, TOWN, COUNTY, STATE, OR UTILITY SERVICE PROVIDER) HAVING AUTHORITY.
9.2. "STATE HIGHWAY SPECIFICATIONS" - STATE OF WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, CURRENT EDITION AND SUPPLEMENTS
9.3. "STANDARD SPECIFICATIONS" - STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, CURRENT EDITION AND SUPPLEMENTS
9.4. WISCONSIN DEPARTMENT OF TRANSPORTATION - "WISDOT"
9.5. WISCONSIN DEPARTMENT OF NATURAL RESOURCES - "WDNR"
9.6. DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES - "DSPS" OR "SPS"

DEMOLITION NOTES

1. THIS PLAN INDICATES ITEMS ON THE PROPERTY INTENDED FOR DEMOLITION BASED ON THE CURRENT SITE DESIGN THAT HAVE BEEN IDENTIFIED BY A REASONABLE OBSERVATION OF THE EXISTING CONDITIONS THROUGH FIELD SURVEY RECONNAISSANCE, "DIGGERS HOTLINE" LOCATION, AND GENERAL "STANDARD OF CARE". THERE MAY BE ADDITIONAL ITEMS THAT CAN NOT BE IDENTIFIED BY A REASONABLE ABOVEGROUND OBSERVATION, OF WHICH THE ENGINEER WOULD HAVE NO KNOWLEDGE OR MAY BE A PART OF ANOTHER DESIGN DISCIPLINE. IT IS THE CONTRACTOR'S/BIDDER'S RESPONSIBILITY TO REVIEW THE PLANS, INSPECT THE SITE, AND PROVIDE THEIR OWN DUE DILIGENCE TO INCLUDE IN THEIR BID WHAT ADDITIONAL ITEMS, IN THEIR OPINION, MAY BE NECESSARY FOR DEMOLITION. ANY ADDITIONAL ITEMS IDENTIFIED BY THE CONTRACTOR/BIDDER SHALL BE IDENTIFIED IN THE BID AND REPORTED TO THE ENGINEER OF RECORD. JSD TAKES NO RESPONSIBILITY FOR ITEMS ON THE PROPERTY THAT COULD NOT BE LOCATED BY A REASONABLE OBSERVATION OF THE PROPERTY OR OF WHICH THEY WOULD HAVE NO KNOWLEDGE.
2. CONTRACTOR SHALL KEEP ALL STREETS AND PRIVATE DRIVES FREE AND CLEAR OF ALL CONSTRUCTION-RELATED DIRT, DUST, AND DEBRIS.
3. ALL TREES WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED UNLESS SPECIFICALLY CALLED OUT FOR PROTECTION. ALL TREES TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY. STUMPS MAY BE GROUND TO PROPOSED SUBGRADE IN GRASSED AREAS ONLY UNLESS DIRECTED BY ENGINEER.
4. ALL LIGHT POLES TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY, INCLUDING BASE AND ALL APPURTENANCES. SALVAGE FOR RELOCATION. COORDINATE RELOCATION AND/OR ABANDONMENT OF ALL ELECTRIC LINES WITH ELECTRICAL ENGINEER AND OWNER PRIOR TO DEMOLITION.
5. ABANDONED/REMOVED ITEMS SHALL BE LEGALLY DISPOSED OF OFFSITE UNLESS OTHERWISE NOTED.
6. CONTRACTOR TO REPLACE ALL SIDEWALK AND CURB AND GUTTER ABUTTING THE PROPERTIES THAT WERE DAMAGED BY THE CONSTRUCTION.
7. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE TO:

7.1. EXAMINE ALL SITE CONDITIONS RELATIVE TO THE CONDITIONS INDICATED ON THE ENGINEERING DRAWINGS. ANY DISCREPANCIES ARE TO BE REPORTED IMMEDIATELY TO THE ENGINEER AND RESOLVED PRIOR TO THE START OF CONSTRUCTION.
7.2. VERIFY UTILITY ELEVATIONS AND NOTIFY ENGINEER OF ANY DISCREPANCIES. NO WORK SHALL BE PERFORMED UNTIL THE DISCREPANCIES ARE RESOLVED.
7.3. NOTIFY ALL UTILITIES OWNER'S PRIOR TO THE REMOVAL OF ANY UNDERGROUND UTILITIES.
7.4. NOTIFY THE DESIGN ENGINEER AND LOCAL CONTROLLING MUNICIPALITY 48 HOURS PRIOR TO THE START OF CONSTRUCTION TO ARRANGE FOR APPROPRIATE CONSTRUCTION INSPECTION.

8. ANY UTILITIES THAT ARE DAMAGED BY THE CONTRACTORS SHALL BE REPAIRED TO THE OWNER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE.
9. CONTRACTOR SHALL COORDINATE PRIVATE UTILITY REMOVAL/ABANDONMENT AND NECESSARY RELOCATION WITH RESPECTIVE UTILITY COMPANY. CONTRACTOR SHALL COORDINATE WITH PRIVATE UTILITY COMPANIES PRIOR TO CONSTRUCTION.
10. ALL DEMOLITION SHALL BE IN ACCORDANCE WITH THE APPROVED JURISDICTION'S RECYCLING PLAN.
11. ANY CONTAMINATED SOILS ENCOUNTERED SHALL BE REMOVED IN ACCORDANCE WITH FEDERAL AND STATE REGULATIONS TO AN APPROPRIATE AND APPROVED LANDFILL.
12. ALL EXISTING UTILITIES SHALL BE FIELD LOCATED AND CLEARLY MARKED BY CONTRACTOR PRIOR TO ANY EXCAVATION. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF ANY DISCREPANCIES OCCUR IN THE LOCATION SHOWN OR PROPOSED IMPROVEMENTS IMPACTING EXISTING UTILITY LINE LOCATION(S). CONTRACTOR SHALL BE RESPONSIBLE FOR CONDUCTING UTILITY LINE OPENINGS (ULO) TO CONFIRM LOCATIONS OR ELEVATIONS, AS REQUESTED BY THE ENGINEER.
13. SEWER ABANDONMENT SHALL BE IN ACCORDANCE WITH SECTION 3.2.24 OF THE STANDARD SPECIFICATIONS AND JURISDICTIONAL SPECIFICATIONS.
14. WATER ABANDONMENT SHALL BE IN ACCORDANCE WITH SECTION 4.14.0 OF THE STANDARD SPECIFICATIONS AND JURISDICTIONAL SPECIFICATIONS.
15. ALL PERIMETER EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO THE START OF DEMOLITION ACTIVITIES. CONTRACTOR SHALL KEEP ALL STREETS AND PAVEMENTS FREE AND CLEAR OF ALL CONSTRUCTION RELATED DIRT, DUST, AND DEBRIS.
16. BUILDING REMOVALS SHALL BE PREFORMED BY A QUALIFIED CONTRACTOR. CONTRACTOR SHALL FOLLOW ALL DEMOLITION REGULATIONS, DISCONNECT ALL UTILITIES, OBTAIN ALL APPLICABLE PERMITS, AND DISPOSE OF ALL BUILDING MATERIALS IN APPROPRIATE AND APPROVED LANDFILLS. DEMOLISHED MATERIALS SHALL NOT BE BURNED OR BURIED ONSITE.
17. CONTRACTOR SHALL REMOVE EXISTING UTILITY PIPE OR PROVIDE PIPE BACKFILLING AFTER REMOVAL OF EXISTING UTILITIES WITHIN BUILDING FOOTPRINT USING "LOW DENSITY CONCRETE/FLOWABLE FILL".
18. RESTORATION OF THE EXISTING ROADWAY RIGHT-OF-WAYS ARE CONSIDERED INCIDENTAL AND SHALL BE PART OF THE COST OF THE UNDERGROUND IMPROVEMENTS, DEMOLITION, AND REMOVAL. THIS INCLUDES CURB AND GUTTER, SIDEWALK, TOPSOIL, SEEDING, AND MULCHING.

CONSTRUCTION SEQUENCING

1. INSTALL PERIMETER SILT FENCE, WATTLES, INLET PROTECTION, AND CONSTRUCTION ENTRANCE.
2. STRIP AND STOCKPILE TOPSOIL AND INSTALL SILT FENCE AROUND PERIMETER OF STOCKPILE.
3. ROUGH GRADE RETENTION POND AND INSTALL POND OUTLET.
4. CONDUCT ROUGH GRADING EFFORTS AND INSTALL CHECK DAMS WITHIN DRAINAGE DITCHES.
5. INSTALL UTILITY PIPING AND STRUCTURES, IMMEDIATELY INSTALL INLET PROTECTION.
6. COMPLETE FINAL GRADING, INSTALLATION OF GRAVEL BASE COURSES, PLACEMENT OF CURBS, PAVEMENTS, WALKS, ETC.
7. PLACE TOPSOIL AND IMMEDIATELY STABILIZE DISTURBED AREAS WITH EROSION CONTROL MEASURES AS INDICATED ON PLANS.
8. RESTORE RETENTION POND (FINAL GRADE RETENTION POND PER PLAN REQUIREMENTS).
9. EROSION CONTROLS SHALL NOT BE REMOVED UNTIL SITE IS FULLY STABILIZED OR 70% CONTIGUOUS VEGETATIVE COVER IS ESTABLISHED.

CONTRACTOR MAY MODIFY SEQUENCING AFTER ITEM NO. 1 AS NEEDED TO COMPLETE CONSTRUCTION IF EROSION CONTROLS ARE MAINTAINED IN ACCORDANCE WITH THE CONSTRUCTION SITE EROSION CONTROL REQUIREMENTS.

PAVING NOTES

1. GENERAL:
1.1. PAVING SHALL CONFORM TO STATE HIGHWAY SPECIFICATIONS, APPLICABLE JURISDICTIONAL SPECIFICATIONS, AND THE GEOTECHNICAL REPORT PREPARED BY **[FIRM NAME]**, TITLED **["REPORT TITLE"]**, ISSUE DATE **[DATE]**. ALL REFERENCES TO THE "GEOTECHNICAL REPORT" SHALL BE UNDERSTOOD AS THE AFOREMENTIONED REPORT.
1.2. ALL PAVING DIMENSIONS ARE TO FACE OF CURB UNLESS SPECIFIED OTHERWISE.
1.3. ALL SPOT GRADES ARE TO EDGE OF PAVEMENT UNLESS SPECIFIED OTHERWISE.
1.4. SURFACE PREPARATION - NOTIFY ENGINEER/OWNER OF UNSATISFACTORY CONDITIONS. DO NOT BEGIN PAVING WORK UNTIL DEFICIENT SUBBASE AREAS HAVE BEEN CORRECTED AND ARE READY TO RECEIVE PAVING.
1.5. ANY REQUIRED REPLACEMENT OF PUBLIC CURB AND GUTTER, PAVEMENT, OR SIDEWALK SHALL MATCH EXISTING AND MEET JURISDICTIONAL REQUIREMENTS.

2. CRUSHED AGGREGATE BASE COURSE SPECIFICATIONS:
2.1. THE TOP LAYER OF BASE COURSE SHALL CONFORM TO SECTIONS 301 AND 305 OF THE STATE HIGHWAY SPECIFICATIONS.
2.2. RECLAIMED OR RECYCLED ASPHALT MAY NOT BE USED AS CRUSHED AGGREGATE BASE COURSE UNLESS SPECIFICALLY APPROVED BY THE ENGINEER OF RECORD. USE OF ANY OTHER REPROCESSED OR BLENDED MATERIAL MUST FIRST BE APPROVED BY ENGINEER OF RECORD.
2.3. DO NOT PLACE BASE ON FROZEN FOUNDATIONS UNLESS THE ENGINEER APPROVES OTHERWISE.
2.4. DO NOT PLACE BASE ON FOUNDATIONS THAT ARE SOFT, SPONGY, OR COVERED BY ICE OR SNOW.

3. HOT MIXED ASPHALT (HMA) PAVING SPECIFICATIONS:
3.1. THE PLACING, CONSTRUCTION, AND COMPOSITION OF THE BASE COURSE AND HMA SURFACE COURSE SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTIONS 450, 455, 460, AND 465 OF THE STATE HIGHWAY SPECIFICATIONS.
3.2. WEATHER LIMITATIONS:
3.2.1. DO NOT PLACE HMA WHEN BASE IS WET OR CONTAINS EXCESS MOISTURE.
3.2.2. DO NOT PLACE ASPHALTIC MIXTURE WHEN THE AIR TEMPERATURE IS APPROXIMATELY 3° ABOVE GRADE, IN SHADE, AND AWAY FROM ARTIFICIAL HEAT SOURCES IS LESS THAN 40°F UNLESS A VALID ENGINEER-ACCEPTED COLD WEATHER PAVING PLAN IS IN EFFECT.
3.2.3. PLACE ASPHALTIC MIXTURE ONLY ON A PREPARED, FIRM, AND COMPACTED BASE, FOUNDATION LAYER, OR EXISTING PAVEMENT SUBSTANTIALLY SURFACE-DRY AND FREE OF LOOSE AND FOREIGN MATERIAL. DO NOT PLACE OVER FROZEN SUBGRADE OR BASE, OR WHERE THE ROADBED IS UNSTABLE.
3.2.4. APPLY TACK COAT ONLY WHEN THE AIR TEMPERATURE IS 32°F OR MORE UNLESS THE ENGINEER APPROVES OTHERWISE IN WRITING.
3.2.5. ALL ASPHALT (BOTH UPPER AND LOWER LAYERS) SHALL BE DELIVERED TO THE PROJECT SITE AT A TEMPERATURE NOT LOWER THAN 250°F.
3.3. CONTRACTOR SHALL ESTABLISH AND MAINTAIN REQUIRED LINES AND ELEVATIONS FOR EACH COURSE DURING CONSTRUCTION.
3.4. BINDER COURSE AGGREGATE:
3.4.1. THE AGGREGATE FOR THE BINDER COURSE SHALL CONFORM TO SECTION 460 OF THE STATE HIGHWAY SPECIFICATIONS.
3.5. SURFACE COURSE AGGREGATE
3.5.1. THE AGGREGATE FOR THE SURFACE COURSE SHALL CONFORM TO SECTIONS 460 AND 465 OF THE STATE HIGHWAY SPECIFICATIONS.
3.6. ASPHALTIC MATERIALS
3.6.1. THE ASPHALTIC MATERIALS SHALL CONFORM TO SECTIONS 455, 460, AND 465 OF THE STATE HIGHWAY SPECIFICATIONS.

4. CONCRETE PAVING SPECIFICATIONS:
4.1. CONCRETE PAVING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTIONS 405, 415, AND 416 OF THE STATE HIGHWAY SPECIFICATIONS.
4.2. CURING COMPOUNDS SHALL CONFORM TO SECTION 415 OF THE STATE HIGHWAY SPECIFICATIONS.
4.3. CONTRACTOR SHALL PROVIDE A JOINTING PLAN TO ENGINEER IF NOT INCLUDED IN THE PLANS. CONTRACTOR SHALL PROVIDE CONTROL JOINTS AND CONSTRUCTION JOINTS OF ONE-QUARTER CONCRETE THICKNESS AT AN EQUAL RATIO OF LENGTH TO WIDTH WHEREVER POSSIBLE WITH A MAXIMUM LENGTH BETWEEN JOINTS OF 15' ON CENTER
4.4. CONTRACTOR SHALL PROVIDE EXPANSION JOINTS IN SIDEWALKS AT A MAXIMUM 100' APART.
4.5. PLACE EXPANSION JOINTS IN CURB, GUTTER, OR CURB AND GUTTER CONSTRUCTED NEXT TO ASPHALTIC PAVEMENT OR SURFACING. LOCATE JOINTS EVERYWHERE THAT TANGENT AND RADIAL CURB OR CURB AND GUTTER MEET; ON EACH SIDE OF EVERY INLET 3' FROM THE INLET, BUT NO CLOSER THAN 6' FROM ANOTHER JOINT; AND ON TANGENT SECTIONS PLACE BETWEEN 6' AND 300'.
4.6. IF CONSTRUCTING CURB, GUTTER, OR CURB AND GUTTER NEXT TO, OR ON, CONCRETE PAVEMENT CONSTRUCTED WITH EXPANSION JOINTS, THEN PLACE EXPANSION JOINTS TO MATCH THE EXPANSION JOINT LOCATIONS IN THE PAVEMENTS.
4.7. FOR CURB AND GUTTER, FORM CONTRACTION JOINTS BY SAWING OR FORMING AN INDUCED PLANE OF WEAKNESS AT LEAST 2" DEEP IN THE CURB, GUTTER, OR CURB AND GUTTER DIRECTLY OPPOSITE CONSTRUCTION OR CONTRACTION JOINTS IN ADJOINING CONCRETE PAVEMENT AND AT THE REQUIRED SPACING IN CURB, GUTTER, OR CURB AND GUTTER ADJOINING ASPHALTIC PAVEMENT. SPACE JOINTS BETWEEN 6' AND APPROXIMATELY 20' APART, AS THE ENGINEER DIRECTS.
4.8. EXTERIOR CONCRETE SURFACES SHALL BE BROOM FINISHED.
4.9. CONTRACTOR SHALL INSTALL TRUNCATED DOME WARNING DETECTION FIELD SHALL BE PLACED AT ALL ADA RAMPS AS SPECIFIED ON PLANS AND IN ACCORDANCE WITH STATE AND FEDERAL REQUIREMENTS.

5. PAVEMENT MARKING SPECIFICATIONS:
5.1. ALL PARKING STALL LINES SHALL BE 4" WIDE, HIGH VISIBILITY YELLOW LATEX PAINT.
5.2. ALL PAVEMENT MARKINGS INCLUDING STOP BARS, CROSSWALKS, DIRECTIONAL ARROWS, PARKING STALL LINES, ADA STALL MARKINGS, NO PARKING ZONES, AND DROP-OFF/PICK-UP ZONES SHALL BE PAINTED WITH LATEX PAINT PER SPECIFICATIONS.

SEEDING AND RESTORATION NOTES

1. CONTRACTOR SHALL PROVIDE NOTICE TO THE JURISDICTIONAL AUTHORITIES IN ADVANCE OF ANY SOIL DISTURBING ACTIVITIES, IN ACCORDANCE WITH MUNICIPAL REQUIREMENTS.
2. ALL DISTURBED AREAS SHALL BE SODDED AND/OR SEEDED AND MULCHED IMMEDIATELY FOLLOWING GRADING ACTIVITIES.
3. CONTRACTOR SHALL WATER ALL NEWLY SODDED/SEEDED AREAS DURING THE SUMMER MONTHS WHENEVER THERE IS A 7-DAY LAPSE WITH NO SIGNIFICANT RAINFALL.
4. ALL SLOPES 20% OR GREATER SHALL BE TEMPORARILY SEEDED, MULCHED, OR OTHER MEANS OF COVER PLACED ON THEM WITHIN 2 WEEKS OF DISTURBANCE. REFER TO STABILIZATION PRACTICES IN THE EROSION CONTROL NOTES FOR FURTHER SPECIFICATIONS.
5. CONTRACTOR SHALL CHISEL-PLOW OR DEEP TILL WITH DOUBLE TINES ALL STORMWATER MANAGEMENT FACILITIES JUST PRIOR TO SODDING AND/OR SEEDING AND MULCHING TO PROMOTE INFILTRATION.
6. SEEDING SPECIFICATIONS:
6.1. TURF LAWN SEED MIXTURE: WISDOT SEED MIX NO. 40 AT RATES SPECIFIED IN SECTION 630 OF THE STATE HIGHWAY SPECIFICATIONS
6.2. LOW MAINTENANCE AREA SEED MIXTURE: WISDOT SEED MIX NO. 10 OR 20 APPLIED AT RATES AS SPECIFIED IN SECTION 630 OF THE STATE HIGHWAY SPECIFICATIONS.
6.3. NO-MOW AREA SEED MIXTURE: NO-MOW LAWN SEED MIX, AS PROVIDED BY PRAIRIE NURSERY, P.O. BOX 306, WESTFIELD, WISCONSIN, 53964, TEL. 608-296-3679 (OR APPROVED EQUIVALENT). SEEDING RATE SHALL BE PER MANUFACTURE'S RECOMMENDATIONS.
7. SEED PREPARATION SPECIFICATIONS:
7.1. SCARIFY SUBSOILS TO A DEPTH OF 3" WHERE TOPSOIL SHALL BE PLACED TO REDUCE COMPACTION.
7.2. PLACE TOPSOIL AT A MINIMUM DEPTH OF 6" UNLESS OTHERWISE NOTED ON THE PLANS.
7.3. APPLY FERTILIZER IN ACCORDANCE WITH SEED MIX MANUFACTURES RECOMMENDATIONS.
7.4. SOW SEED AT RATES SPECIFIED USING METHOD "A" OR METHOD "B" AS SPECIFIED IN SECTION 630 OF THE STATE HIGHWAY SPECIFICATIONS.
8. SEED MULCHING/EROSION MATTING SPECIFICATIONS:
8.1. ALL SEEDED AREAS WITH SLOPES FLATTER THAN 4:1, UNLESS OTHERWISE NOTED ON THE PLANS, SHALL BE STABILIZED WITH WEED-FREE WHEAT STRAW MULCH WITH METHODS AND RATES IN ACCORDANCE WITH SECTION 627 OF THE STATE HIGHWAY SPECIFICATIONS.
8.2. ALL SEEDED AREAS WITH SLOPES EQUAL TO OR STEEPER THAN 4:1, UNLESS OTHERWISE NOTED ON THE PLANS, SHALL BE STABILIZED WITH EROSION MATTING MATERIALS AS SPECIFIED ON THE PLANS. EROSION MATTING SHALL BE IN ACCORDANCE WITH SECTION 628 OF THE STATE HIGHWAY SPECIFICATIONS.

UTILITY NOTES

1. ALL EXISTING UTILITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATION AS TO THE TYPE AND LOCATIONS OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. CONTRACTOR/OWNER SHALL CALL "DIGGERS HOTLINE" PRIOR TO ANY CONSTRUCTION.
2. PRIOR TO CONSTRUCTION, THE PRIME CONTRACTOR IS RESPONSIBLE FOR:
2.1. EXAMINING ALL SITE CONDITIONS RELATIVE TO THE CONDITIONS INDICATED ON THE ENGINEERING DRAWINGS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER AND RESOLVED PRIOR TO THE START OF CONSTRUCTION.
2.2. OBTAINING ALL PERMITS INCLUDING PERMIT COSTS, TAP FEES, METER DEPOSITS, BONDS, AND ALL OTHER FEES REQUIRED FOR PROPOSED WORK TO OBTAIN OCCUPANCY.
2.3. VERIFYING ALL ELEVATIONS, LOCATIONS, AND SIZES OF SANITARY, WATER, AND STORM LATERALS AND CHECK ALL UTILITY CROSSINGS FOR CONFLICTS. NOTIFY ENGINEER OF ANY DISCREPANCY. NO WORK SHALL BE PERFORMED UNTIL THE DISCREPANCY IS RESOLVED.
2.4. NOTIFYING ALL UTILITIES PRIOR TO INSTALLATION OF ANY UNDERGROUND IMPROVEMENTS.
2.5. NOTIFYING THE DESIGN ENGINEER AND JURISDICTIONAL AUTHORITY 48 HOURS PRIOR TO THE START OF CONSTRUCTION TO ARRANGE FOR APPROPRIATE CONSTRUCTION OBSERVATION.
2.6. COORDINATING ALL CONSTRUCTION WITH OTHER CONTRACTORS INVOLVED WITH CONSTRUCTION OF THE PROPOSED DEVELOPMENT AND FOR REPORTING ANY ERRORS OR DISCREPANCIES BETWEEN THESE PLANS AND PLANS PREPARED BY OTHERS.
3. ALL UTILITY WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC UTILITIES AND STATE DSPS/SPS AND LOCAL CODES AND SPECIFICATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE WHICH SPECIFICATIONS AND CODES APPLY, AND TO COORDINATE ALL CONSTRUCTION ACTIVITIES WITH THE APPROPRIATE JURISDICTIONAL AUTHORITIES.
4. SPECIFICATIONS SHALL COMPLY WITH THE JURISDICTIONAL AUTHORITY'S SPECIAL PROVISIONS.
5. LENGTHS OF ALL UTILITIES ARE TO CENTER OF STRUCTURES OR FITTINGS AND MAY VARY SLIGHTLY FROM PLAN. LENGTHS SHALL BE VERIFIED IN THE FIELD DURING CONSTRUCTION.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY DURING THE CONSTRUCTION OF IMPROVEMENTS.
7. CONTRACTOR SHALL INSTALL A PEDESTRIAN FENCE AROUND ALL EXCAVATIONS TO BE LEFT OPEN OVERNIGHT AS REQUIRED IN CONSTRUCTION SITES WHERE THE POTENTIAL FOR PEDESTRIAN INJURY EXISTS.
8. CONTRACTOR SHALL ADJUST AND/OR RECONSTRUCT ALL UTILITY COVERS (SUCH AS MANHOLE COVERS, VALVE BOX COVERS, ETC.) TO MATCH THE FINISHED GRADES OF THE AREAS EFFECTED BY THE CONSTRUCTION.
9. ALL NON-METALLIC UTILITY PIPES (SANITARY SEWER, STORM SEWER, AND WATER PIPING) SHALL BE INSTALLED IN CONJUNCTION WITH TRACER WIRE AS REQUIRED BY SPS 382.30(11)(H), SPS 382.36(7)(C)10., AND SPS 382.40(8)(K). COLOR OF TRACER WIRE SHALL BE: SANITARY SEWER - GREEN, STORM SEWER - BROWN, WATER - BLUE, NON-POTABLE WATER - PURPLE.
10. DRY UTILITIES (COMMUNICATION, TELEPHONE, GAS, ELECTRIC, ETC.) ARE SHOWN FOR GENERAL ROUTING ONLY. CONTRACTOR SHALL COORDINATE DESIGN AND FINAL LOCATION WITH APPROPRIATE UTILITY COMPANY.
11. THE PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL CONSTRUCTION WITH OTHER CONTRACTORS INVOLVED WITH CONSTRUCTION OF THE PROPOSED DEVELOPMENT AND FOR REPORTING ANY ERRORS OR DISCREPANCIES BETWEEN THESE PLANS AND PLANS PREPARED BY OTHERS.
12. ANY SANITARY SEWER, SANITARY SEWER SERVICES, WATER MAIN, WATER SERVICES, STORM SEWER, OR OTHER UTILITIES, WHICH ARE DAMAGED BY THE CONTRACTORS, SHALL BE REPAIRED TO THE JURISDICTIONAL AUTHORITY'S SATISFACTION AT THE CONTRACTOR'S EXPENSE.
13. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE ENGINEER WITH AS-BUILT CONDITIONS OF THE INSTALLED IMPROVEMENTS IN ORDER THAT THE APPROPRIATE DRAWINGS CAN BE PREPARED, IF REQUIRED, ANY CHANGES TO THE DRAWINGS OR ADDITIONAL ITEMS MUST BE REPORTED TO THE ENGINEER AS WORK PROGRESSES.
14. IN ANY LOCATIONS WHERE BUILDING SEWERS (STORM AND SANITARY) ARE INSTALLED WITH LESS THAN THE MINIMUM COVER AS SPECIFIED IN SPS 382.30(11)(c) OR WATER PIPING 382.40(8)(a), CONTRACTOR SHALL INSTALL INSULATION IN ACCORDANCE WITH SPS 382.30(11)(c)2. FOR PROTECTION FROM FROST.
15. STORM SEWER SPECIFICATIONS:
15.1. PIPE:
15.1.1. REINFORCED CONCRETE PIPE (RCP) - SHALL MEET THE REQUIREMENTS OF ASTM CLASS III (MINIMUM) C76 WITH RUBBER GASKET JOINTS CONFORMING TO ASTM C443.
15.1.2. HIGH DENSITY DUAL-WALL POLYETHYLENE CORRUGATED PIPE (HDPE) - SHALL BE AS MANUFACTURED BY ADS OR EQUAL WITH WATERTIGHT JOINTS, AND SHALL MEET THE REQUIREMENTS OF AASHTO DESIGNATION M294 TYPE "S".
15.1.3. POLYVINYL CHLORIDE (PVC) - SHALL MEET REQUIREMENTS OF ASTM D3034, SDR 35 FOR PIPE SIZES 8"-15" WITH INTEGRAL BELL TYPE FLEXIBLE ELECTROMETRIC JOINTS, MEETING THE REQUIREMENTS OF ASTM D3212. ASTM 1785 SCHEDULE 40 FOR PIPE DIAMETERS 4"-6". SDR 35 SHALL BE USED FOR DEPTHS 3'-15' AND SDR 26 FOR DEPTHS 16'-25' DEPENDENT ON LOCAL JURISDICTION.
15.2. INLETS AND CATCH BASINS:
15.2.1. INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CHAPTER 3.6.3 AND DETAIL DRAWINGS FILE. NO. 28 OR 29 OF THE STANDARD SPECIFICATIONS, OR APPROVED EQUAL WITH A 2'X3' MAXIMUM OPENING.
15.2.2. POLYVINYL CHLORIDE (PVC) INLETS BY NYLOPLAST ONLY WHEN SPECIFIED ON PLANS, CONFORMING TO ASTM D1781, ASTM D3212, ASTM F477, AND MANUFACTURER'S REQUIREMENTS. REFER TO PLANS FOR LID OR GRATE SPECIFICATION.
15.2.3. FRAME AND GRATE/LIDS:
15.2.3.1. CURB FRAME AND GRATES SHALL BE NEENAH R-3067 WITH TYPE "R" GRATE OR EQUAL, UNLESS AS SPECIFIED IN THE PLANS.
15.2.3.2. SOLID LID FRAME AND GRATES SHALL BE NEENAH R-1550, HEAVY DUTY NON-ROCKING SOLID LID OR EQUAL, UNLESS AS SPECIFIED IN THE PLANS.
15.2.3.3. GRATE FRAME AND GRATES SHALL BE NEENAH R-1550, HEAVY DUTY WITH A R-2578 GRATE OR EQUAL, UNLESS AS SPECIFIED IN THE PLANS.
15.2.4. MANHOLES:
15.2.4.1. MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH CHAPTER 3.5.0 AND DETAIL DRAWINGS FILE NO. 11 AND/OR 12 OF THE STANDARD SPECIFICATIONS.
15.2.3.2. MANHOLE FRAMES AND COVERS SHALL BE NEENAH R-1550, HEAVY DUTY NON-ROCKING SOLID LID OR EQUAL, UNLESS AS SPECIFIED IN THE PLANS.
15.3. BACKFILL AND BEDDING:
15.3.1. STORM SEWER SHALL BE CONSTRUCTED WITH GRAVEL BACKFILL AND CLASS "B" BEDDING IN ALL PAVED AREAS AND TO A POINT 5' BEYOND THE EDGE OF PAVEMENT. TRENCHES RUNNING PARALLEL TO AND LESS THAN 5' FROM THE EDGE OF PAVEMENT SHALL ALSO REQUIRE GRAVEL BACKFILL.
15.3.2. LANDSCAPED AREAS MAY BE BACKFILLED WITH EXCAVATED MATERIAL IN CONFORMANCE WITH SECTION 8.43.5 OF THE STANDARD SPECIFICATIONS.
15.4. FIELD TILE CONNECTIONS:
15.4.1. ALL FIELD TILE ENCOUNTERED DURING CONSTRUCTION SHALL BE INCLUDED IN THE UNIT PRICE(S) FOR STORM SEWER. TILE LINES CROSSED BY THE TRENCH SHALL BE REPLACED WITH THE SAME MATERIAL AS THE STORM SEWER.
16. WATER MAIN & WATER LATERAL SPECIFICATIONS:
16.1. PIPE:
16.1.1. DUCTILE IRON PIPE SHALL BE CLASS 52 CONFORMING TO AWWA C151 AND CHAPTER 8.18.0 OF THE STANDARD SPECIFICATIONS.
16.1.2. POLYVINYL CHLORIDE PRESSSURE PIPE (PVC) SHALL BE MANUFACTURED IN ACCORDANCE WITH AWWA C900 DR14 (CLASS 305) FOR SIZES UP TO 4" AND AWWA C900 DR18 (CLASS 235) UP TO 30".WITH INTEGRAL ELASTOMERIC BELL AND SPIGOT JOINTS.
16.1.3. COPPER TYPE K TUBING SHALL CONFORM TO ASTM DESIGNATION B88 FOR WATER SERVICES LESS THAN 2" IN DIAMETER
16.1.4. HIGH DENSITY POLYETHYLENE (HDPE) SHALL CONFORM TO THE REQUIREMENTS OF AWWA C901, SDR 9 MINIMUM FOR SIZES UP TO 3" AND TO AWWA C906, SDR 17 MINIMUM FOR SIZES GREATER THAN 3".
17.2. VALVES AND VALVE BOXES:
17.2.1. GATE VALVES SHALL BE AWWA GATE VALVES MEETING THE REQUIREMENTS OF AWWA C500 AND CHAPTER 8.27.0 OF THE STANDARD SPECIFICATIONS.
17.2.2. CURB STOPS AND CORPORATION VALVES SHALL BE AWWA C800 AND ASTM B62, AND CONFORM TO ANY LOCAL JURISDICTIONAL REQUIREMENTS.
17.3. WATER SERVICES CONNECTIONS
17.3.1. SERVICES 2" IN DIAMETER OR LESS SHALL USE A TAP SERVICE WITH A CORPORATION STOP AND CURB STOP VALVE WITH SERVICE BOX PER JURISDICTIONAL REQUIREMENTS.
17.3.2. SERVICES GREATER THAN 2" IN DIAMETER SHALL USE A TAPPING SLEEVE OR CUT-IN TEE CONNECTION WITH VALVE OF EQUIVALENT PIPE DIAMETER AND VALVE BOX PER JURISDICTIONAL REQUIREMENTS.
17.4. HYDRANTS:
17.4.1. HYDRANTS SHALL CONFORM TO THE SPECIFICATIONS OF THE JURISDICTIONAL AUTHORITIES. THE DISTANCE FROM THE GROUND LINE TO THE CENTERLINE OF THE LOWEST NOZZLE AND THE LOWEST CONNECTION OF THE FIRE DEPARTMENT SHALL BE NO LESS THAN 18 " AND NO GREATER THAN 23"(SEE DETAIL).
17.5. JOINT RESTRAINT:
17.5.1. WHERE SPECIFIED, DUCTILE IRON PIPE SHALL INCLUDE MECHANICAL JOINTS CONFORMING TO CHAPTER 4.4.2(b) OF THE STANDARD SPECIFICATIONS. POLYETHYLENE WRAP SHALL BE USED AROUND ALL MECHAN

GRADING AND EARTHWORK NOTES

1. ALL SITE PREP AND EARTHWORK SHALL CONFORM TO THE GEOTECHNICAL REPORT PREPARED BY **[FIRM NAME]**, TITLED **["REPORT TITLE"]**, ISSUE DATE **[DATE]**. ALL REFERENCES TO THE "GEOTECHNICAL REPORT" SHALL BE UNDERSTOOD AS THE AFOREMENTIONED REPORT.

2. ALL PROPOSED GRADES SHOWN ARE FINISHED GRADES. CONTRACTOR SHALL VERIFY ALL GRADES, MAKE SURE ALL AREAS DRAIN PROPERLY, AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO CONSTRUCTION.

3. CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR COMPUTATIONS OF ALL GRADING QUANTITIES. WHILE JSD PROFESSIONAL SERVICES, INC. ATTEMPTS TO PROVIDE A COST-EFFECTIVE APPROACH TO BALANCE EARTHWORK, GRADING DESIGN IS BASED ON MANY FACTORS, INCLUDING SAFETY, AESTHETICS, AND COMMON ENGINEERING STANDARDS OF CARE. THEREFORE, NO GUARANTEE CAN BE MADE FOR A BALANCED SITE.

4. ALL EXCAVATIONS AND FILLS SHALL BE TO THE ELEVATIONS SHOWN ON THE DRAWINGS AND SHALL INCLUDE SUFFICIENT DEPTHS FOR PLACEMENT OF FILL MATERIALS, BASE COURSES, PAVEMENTS, TOPSOIL, AND OTHER MATERIALS TO THE SPECIFIED DEPTHS.

5. CONTRACTOR SHALL NOT EXCAVATE BELOW ELEVATIONS OR DESIGN GRADES SHOWN ON THE DRAWINGS WITHOUT PRIOR AUTHORIZATION FROM ENGINEER AND OWNER.

6. PRIOR TO ALL EXCAVATION OR FILLING OPERATIONS, CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL TOPSOIL FROM PROPOSED LOCATIONS OF BUILDINGS, STRUCTURES, ROADS, WALKS, OTHER PAVED AREAS, STORM WATER FACILITIES OR WITHIN THE GRADING EXTENTS WHERE EXISTING GRADES ARE ALTERED BY MORE THAN 3". REMOVED OR STRIPPED TOPSOIL SHALL BE SEGREGATED AND STOCKPILED ON-SITE IN AN APPROPRIATE LOCATION TO BE RESPREAD AS SPECIFIED ON THE DRAWINGS.

7. CONTRACTOR SHALL NOT PLACE ANY FILL OR OTHER MATERIALS ON AREAS THAT HAVE NOT HAD TOPSOIL REMOVED, ARE FROZEN, SATURATED, OR YIELDING. CONTRACTOR SHALL NOTIFY OWNER OR ENGINEER IF SUBGRADE CONDITIONS ARE NOT SUITABLE FOR SUPPORTING FILL AND A FURTHER DETERMINATION SHALL BE PROVIDED BY OWNER OR ENGINEER.

8. CONTRACTOR SHALL PLACE THE FILLS IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT INCLUDING LIFT DEPTHS AND COMPACTION EFFORTS.

9. PRIOR TO PLACEMENT OF BASE COURSE MATERIALS IN PAVEMENT OR HARD SURFACE AREAS OR CONDUCTING EXCAVATION BELOW SUBGRADE (EBS) ELEVATIONS, CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER TO CONDUCT AN INSPECTION OF THE PREPARED SUBGRADE AND PROOF-ROLLING. PROOF-ROLLING SHALL BE CONDUCTED BY THE CONTRACTOR IN WITNESS OF THE OWNER AND ENGINEER. OWNER AND ENGINEER SHALL DETERMINE IF AREAS OF EBS ARE REQUIRED. EBS SHALL BE COMPLETED BY THE CONTRACTOR PER THE DIRECTION OF THE OWNER AND ENGINEER.

10. SOIL MATERIAL SPECIFICATIONS:
    - 10.1. FILL AND BACKFILL MATERIALS
      - 10.1.1. MATERIAL SHALL BE SATISFACTORY. MATERIALS EXCAVATED FROM THE SITE, PER THE GEOTECHNICAL REPORT, IF SATISFACTORY MATERIALS ARE NOT AVAILABLE ONSITE OR ADDITIONAL MATERIALS ARE REQUIRED, REFER TO IMPORTED FILL MATERIAL SPECIFICATIONS.
    - 10.2. IMPORTED FILL MATERIAL
      - 10.2.1. MATERIAL SHALL BE PROVIDED BY THE CONTRACTOR FROM OFFSITE BORROW AREAS WHEN SUFFICIENT, SATISFACTORY MATERIALS ARE NOT AVAILABLE ONSITE. IMPORTED FILL MATERIAL SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT AND CONSIST OF CLEAN MATERIAL OF INORGANIC SOILS OR A MIXTURE OF INORGANIC SOIL AND ROCK, STONE, OR GRAVEL. THE MATERIAL SHALL BE FREE OF TOPSOIL, VEGETATION, PAVEMENT RUBBLE, DEBRIS, OR OTHER DELETERIOUS MATERIALS. THE MAXIMUM NOMINAL DIMENSION OF MATERIALS CONSISTING OF ROCK, STONE, OR GRAVEL SHALL BE 6".
    - 10.3. GRANULAR FILL
      - 10.3.1. MATERIAL SHALL CONSIST OF CLEAN MATERIAL MEETING THE REQUIREMENTS OF "GRADE 1" OR "GRADE 2" GRANULAR BACKFILL AS DEFINED IN SECTION 209.2.1 OF THE STATE HIGHWAY SPECIFICATIONS.
    - **10.4. BUILDING STRUCTURAL FILL**
      - **10.4.1. CLEAN MATERIAL MEETING THE REQUIREMENTS OF TYPE A "STRUCTURE BACKFILL" AS DEFINED IN SECTIONS 210.2.1 AND 210.2.2. OF THE STATE HIGHWAY SPECIFICATIONS AND GEOTECHNICAL REPORT .**

CONSTRUCTION SITE DEWATERING NOTES

1. ALL CONSTRUCTION SITE DEWATERING PRACTICES SHALL BE IN ACCORDANCE WITH WDNR TECHNICAL STANDARD 1061 FOR PUMPING TO DISCHARGE RATES OF LESS THAN 70 GPM. CONTRACTOR SHALL BE RESPONSIBLE FOR APPLICABLE JURISDICTIONAL DEWATERING PERMITS. FOR DISCHARGE RATES EXCEEDING 70 GPM, CONTRACTOR SHALL BE RESPONSIBLE FOR PERMITTING OF DEWATERING SYSTEM AS A HIGH CAPACITY DEWATERING WELL WITH WDNR AND LOCAL JURISDICTIONS.

2. CONTRACTOR SHALL DISCHARGE TREATED EFFLUENT FROM DEWATERING SYSTEM TO LOCATIONS IN ACCORDANCE WITH WDNR TECHINCAL STANDARD 1061. CONTRACTOR SHALL OBTAIN APPROVAL FROM LOCAL JURISDICTION OR ADJACENT PRIVATE PROPERTY OWNERS FOR ALL DISCHARGES TO JURISDICTION'S PUBLIC INFRASTRUCTURE OR PRIVATE PROPERTY.

3. IN THE EVENT OF DIRTY/UNCLEAR DISCHARGE, CONTRACTOR SHALL HALT PUMPING OPERATIONS AND EVALUATE THE DEWATERING TREATMENT/FILTERING SYSTEM.

4. IN THE EVENT CONTRACTOR FINDS SIGNS OF CONTAMINATION IN THE GROUNDWATER OR SITE SOILS, ALL DEWATERING PRACTICES SHALL BE HALTED AND CONTAMINATION SHALL BE EVALUATED BY A QUALIFIED PROFESSIONAL TO PREVENT TRANSPORTATION OF CONTAMINATES DOWNSTREAM OF DISCHARGES.
   - 4.1. IF DEWATERING PRACTICES CONTINUE WITH CONTAMINATED GROUNDWATER OR SOIL CONDITIONS, THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL REQUIRED PERMITS AND APPROVALS TO CONTINUE OPERATION OF DEWATERING SYSTEMS.
   - 4.2. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR DISCHARGE CONSTRUCTION SITE DEWATERING PRACTICES TO THE SANITARY SEWER WITHOUT AUTHORIZATION AND PERMIT APPROVALS FROM THE LOCAL JURISDICTION.

STORMWATER FACILITIES CONSTRUCTION NOTES

1. ENGINEER SHALL BE NOTIFIED PRIOR TO INSTALLATION OF STORMWATER MANAGEMENT FACILITIES. CONTRACTOR SHALL PROVIDE ENGINEER DOCUMENTATION OF CONSTRUCTION OF STORMWATER FACILITIES INCLUDING GEOTECHNICAL NOTES ON EXISTING SOILS, PHOTOGRAPHS OF EACH STAGE OF BASIN CONSTRUCTION, LOAD TICKETS AND SPECIFICATION OF MATERIALS USED IN THE BASIN, AND ELEVATION OF CRITICAL ITEMS SUCH AS PIPES, EXCAVATIONS, DRAINAGE STONE BOTTOM, ETC.

2. ERECT CONSTRUCTION FENCING OR SNOW FENCING AROUND PROPOSED STORMWATER FACILITIES INTENDED TO INFILTRATE STORMWATER TO PROTECT THESE SOILS FROM DISTURBANCE AND COMPACTION. CONSTRUCTION TRAFFIC, HEAVY EQUIPMENT, AND SOIL STOCKPILES SHALL NOT BE PLACED IN AREAS WHERE PROPOSED INFILTRATE AREAS ARE LOCATED.

3. STORMWATER MANAGEMENT FACILITIES FOR INFILTRATION SHALL BE INSTALLED AFTER SUBSTANTIAL COMPLETION OF FINAL SITE GRADING AND SOILS HAVE BEEN STABILIZED.

4. TEMPORARY SEDIMENT BASINS SHALL BE REMOVED IN THEIR ENTIRETY AFTER CONSTRUCTION OF STORMWATER MANAGEMENT FACILITIES. PERMANENT STORMWATER BASINS USED AS TEMPORARY SEDIMENT BASINS SHALL BE DREDGED TO DESIGN DEPTH AFTER SITE IS STABILIZED.

5. REFER TO PROJECT DETAILS FOR FURTHER INFORMATION AND SPECIFICATIONS FOR THE CONSTRUCTION OF THE STORMWATER FACILITIES.

CONTAMINATED SOILS - NOTICE TO CONTRACTOR

1. THE OWNER/DEVELOPER, **[INSERT OWNER/DEVELOPER NAME]**, COMPLETED TESTING AND ANALYSIS FOR SOILS AND GROUNDWATER CONTAMINATION WITHIN THE PROJECT LIMITS WHERE EXCAVATION IS REQUIRED. TESTING AND ANALYSIS INDICATES THAT:
   - **1.1. [ENTER BRIEF DESCRIPTION OF SOIL/GROUNDWATER CONTAMINANTS ENCOUNTERED]**
   - **1.2. [ENTER BRIEF DESCRIPTION OF SOIL/GROUNDWATER CONTAMINANTS ENCOUNTERED]**

2. TESTING AND ANALYSIS WAS COMPLETED BY THE OWNER/DEVELOPER CONSULTANT, **[NAME OF FIRM]**, AND RESULTS HAVE BEEN DOCUMENTED IN A REPORT TITLED THE FOLLOWING:
   [REPORT TITLE]
   [REPORT SUBTITLE]
   [REPORT SUBTITLE]
   [PROJECT NAME/ADDRESS/LOCATION]
   [REPORT ISSUANCE DATE AND/OR REVISIONS]

3. PROPER HANDLING AND DISPOSAL OF ENCOUNTERED CONTAMINATED MATERIALS IS SHALL BE IN ACCORDANCE WITH THE PROJECT'S MATERIAL MANAGEMENT PLAN (MMP). IF CONTRACTOR ENCOUNTERS ANY OTHER SOIL OR GROUNDWATER CONTAMINATION NOT PREVIOUSLY FOUND IN TESTING OR ANALYSES, CONTRACTOR SHALL SUSPEND EXCAVATION ACTIVITIES IN THE AREA AND CONSULT WITH THE OWNER/DEVELOPER.,

4. CONTRACTOR(S) TAKING PART IN ACTIVITIES THAT WILL RESULT IN THE REASONABLE PROBABILITY OF EXPOSURE TO SAFETY AND HEALTH HAZARDS ASSOCIATED WITH HAZARDOUS MATERIALS SHALL HAVE COMPLETED HEALTH AND SAFETY TRAINING THAT MEETS O.S.H.A. REQUIREMENTS FOR HAZARDOUS WASTE AND EMERGENCY RESPONSE (H.A.Z.W.O.P.E.R.) AS PROVIDED IN 29 CFR 1910.120. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING SITE-SPECIFIC HEALTH AND SAFETY PLAN AND DEVELOP, DELINEATE, AND ENFORCE THE HEALTH AND SAFETY EXCLUSION ZONES FOR EACH CONTAMINATED SITE LOCATIONS AS REQUIRED BY 29 CFR 1910.120.

5. FOR FURTHER INFORMATION REGARDING PREVIOUS INVESTIGATION AND REMEDIATION ACTIVITIES AT THIS SITE, CONTACT:
   [OWNER/DEVELOPER NAME]
   [OWNER/DEVELOPER CONTACT INFO]
   [OWNER/DEVELOPER CONTACT INFO]
   [OWNER/DEVELOPER CONTACT INFO]
   [OWNER/DEVELOPER CONTACT INFO]

DEMOLITION NOTES CONTAMINATED SOILS

1. REFER TO MATERIAL HANDLING PLAN FOR SOIL DISPOSAL. THREE CLASSES OF MATERIALS HAVE BEEN IDENTIFIED ON THE SUBJECT PROPERTY AND ARE DESCRIBED AS FOLLOWS:
   - 1.1. CLASS I MATERIAL
     - **1.1.1. [GENERAL DESCRIPTION OF MATERIAL COMPOSITION AND CONTAMINATION TYPES]. THE MATERIAL IS REGULATED BY THE STATE OF WISCONSIN AND REQUIRES DISPOSAL AT A LICENSED LANDFILL FACILITY.**
   - 1.2. CLASS II MATERIAL
     - **1.2.1. [GENERAL DESCRIPTION OF MATERIAL COMPOSITION AND CONTAMINATION TYPES]. THE MATERIAL IS REGULATED BY THE STATE OF WISCONSIN AND REQUIRES DISPOSAL AT A LICENSED LANDFILL FACILITY.**
   - 1.3. CLASS III MATERIAL
     - 1.3.1. SHALL **CONSIST OF NATURAL SOILS CONTAINING NO EVIDENCE OF FILL, CONSTRUCTION RUBBLE, CONCRETE, FOUNDRY SAND, SLAG, ASPHALT, AND/OR CONTAMINATION BASED ON VISUAL FIELD OBSERVATIONS AND/OR PREVIOUS DATA OF SOIL COLLECTED FROM THE AREA(S) FROM WHICH THIS MATERIAL IS BEING REMOVED. ROUTINE FIELD OBSERVATIONS/SCREENING WILL ALSO BE PERFORMED TO CONFIRM THE SOIL QUALITY. THIS MATERIAL WILL LIKELY BE ABLE TO BE REUSED ONSITE.**

2. THE STOCKPILING OF EACH CLASS OF MATERIALS SHALL BE AS FOLLOWS:
   - 2.1. CLASS I/II MATERIAL
     - **2.1.1. MATERIAL SHALL BE PLACED IN A TEMPORARY WASTE DUMPSTER OR WITHIN THE BED OF A WASTE HAULING VEHICLE PERMITTED TO HAUL SPECIAL WASTES. ONCE FILLED, ALL SUCH HOLDING CONTAINERS WILL BE COVERED WITH AN IMPERVIOUS MATERIAL. ALTERNATIVELY, CLASS I AND II MATERIAL MAY BE TEMPORARILY STOCKPILED ONSITE. ALL STOCKPILED CLASS I AND II MATERIAL MUST BE PLACED ON AND ALSO COVERED WITH AN IMPERVIOUS MATERIAL.**
   - 2.2. CLASS III MATERIAL
     - **2.2.1. MATERIAL TEMPORARILY STOCKPILE(S) WILL BE MANAGED USING STANDARD EROSION CONTROL MEASURES REQUIRED AT CONSTRUCTION SITES. THE CLASS III MATERIAL MAY BE TREATED AS CLEAN FILL AND MAY BE REUSED ONSITE WHERE POSSIBLE.**

3. WASTE MANIFESTS WILL BE REQUIRED FOR ALL SOLID WASTE MATERIALS DISPOSED AT A LICENSED LANDFILL FACILITY. THE DISPOSAL OF EACH CLASS OF MATERIALS SHALL BE AS FOLLOWS:
   - 3.1. CLASS I/II MATERIAL
     - **3.1.1. MATERIAL SHALL CONSIST OF CONTAMINATED FILL/SOIL SAND WILL BE TREATED AS "CONTAMINATED SOIL." THIS MATERIAL IS REGULATED BY THE STATE OF WISCONSIN AND REQUIRES DISPOSAL AT A LICENSED LANDFILL RECYCLING AND DISPOSAL FACILITY. THIS MATERIAL MAY BE DISPOSED AT [DEFINE LANFILL LOCATION, IF KNOWN]**
   - 3.2. CLASS III MATERIAL
     - **3.2.1. MATERIAL SHALL CONSIST OF NON-CONTAMINATED FILL SOILS AND/OR NATURAL SOILS, TOPSOIL, AND/OR GRAVEL SUBBASE LOCATED UNDER PAVEMENT AREAS. THIS MATERIAL MAY BE TREATED AS CLEAN FILL AND IS TO BE REUSED ONSITE WHERE POSSIBLE.**

4. **EXISTING METHANE MONITORING WELLS SHALL BE PRESERVED. IF MONITORING WELLS ARE IN CONFLICT WITH PROPOSED CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY [ENVIRONMENTAL CONSULTANT FIRM NAME & CONTACT INFORMATION]**

5. **DEWATERING EFFLUENT MAY BE DISCHARGED TO [LOCATION DESCRIPTION]. REFER TO [PERMIT NUMBER/APPROVAL REFERENCE] FOR PERMIT CONDITIONS. CONTACT [JURISDICTIAL/UTILITY CONTRACT ENTITY AND CONTACT INFORMATION]**

LEGEND

- PROPERTY LINE
- EASEMENT LINE
- BUILDING SETBACK LINE
- DEMOLITION – SAWCUT EXISTING PAVEMENT
- DEMOLITION – REMOVAL OF CURB AND GUTTER
- DEMOLITION – SAWCUT HEAD OF CURB AND GUTTER
- DEMOLITION – REMOVAL OF ASPHALT AND BASE
- DEMOLITION – REMOVAL OF CONCRETE AND BASE
- DEMOLITION – REMOVAL OF GRAVEL
- DEMOLITION – REMOVAL OF UTILITIES
- DEMOLITION – CLEAR AND GRUB
- PROTECT EXISTING TREE
- EDGE OF PAVEMENT
- STANDARD CURB AND GUTTER
- REJECT CURB AND GUTTER
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- HEAVY DUTY CONCRETE PAVEMENT
- PROPOSED 1 FOOT CONTOUR
- PROPOSED 5 FOOT CONTOUR
- EXISTING 1 FOOT CONTOUR
- EXISTING 5 FOOT CONTOUR
- DRAINAGE DIRECTION
- GRADE BREAK
- STORMWATER MANAGEMENT AREA
- RETAINING WALL
- BOULDER WALL
- FENCE
- LIGHT POLE (REFER TO PHOTOMETRIC PLAN)
- SANITARY SEWER
- WATERMAIN
- STORM SEWER
- 8'x4'x4" INSULATION (PLAN VIEW)
- 8'x4'x4" INSULATION (PROFILE VIEW)
- SILT FENCE
- RIP-RAP
- CONSTRUCTION ENTRANCE
- EROSION MATTING
- DITCH CHECK
- FRAMED INLET PROTECTION
- SPOT ELEVATION
  - EP – EDGE OF PAVEMENT
  - FG – FINISH GRADE
  - EC – EDGE OF CONCRETE
  - EX – MATCH EXISTING GRADE
  - SW – SIDEWALK

FG: 1068.56

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FITCHBURG PARTNERS, LLC.

CLIENT ADDRESS:
80 OTTAWA AVE. NW, SUITE 410
GRAND RAPIDS, MI 49503

PROJECT:
JAMESTOWN QUARRY

PROJECT LOCATION:
2975 KAPEC ROAD
DANE COUNTY
FITCHBURG, WI 53719

PLAN MODIFICATIONS:

#	Date:	Description:
1	05.21.24	PRELIMINARY PLAT
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Designed By: MSS
Reviewed By:
Approved By: CD

SHEET TITLE:
NOTES AND LEGEND

SHEET NUMBER:
C1.1

JSD PROJECT NO: 22-11636

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Reviewed By:
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SHEET TITLE:
DEMOLITION PLAN

SHEET NUMBER:
C2.0

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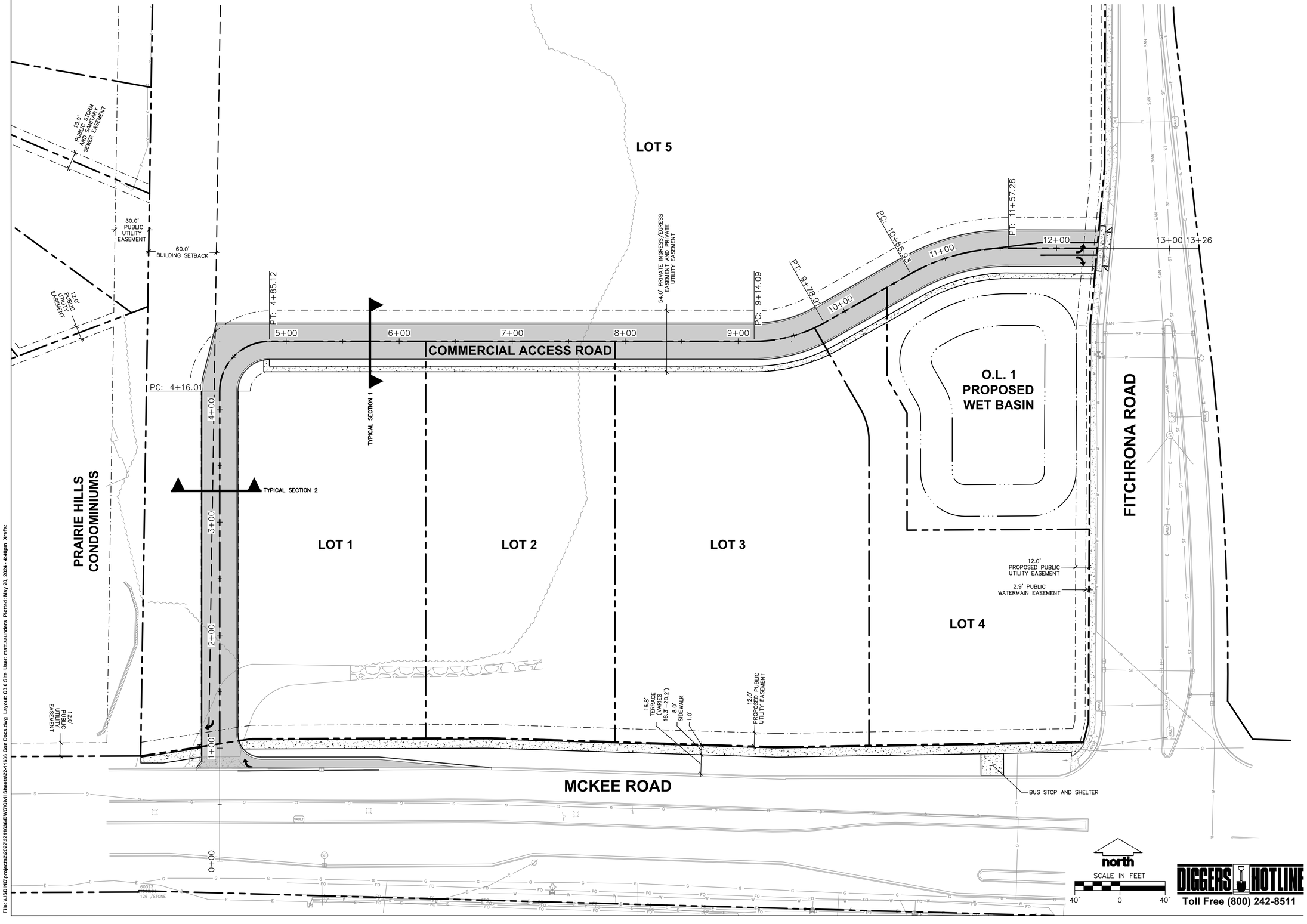

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SHEET TITLE:
SITE PLAN

SHEET NUMBER:
C3.0

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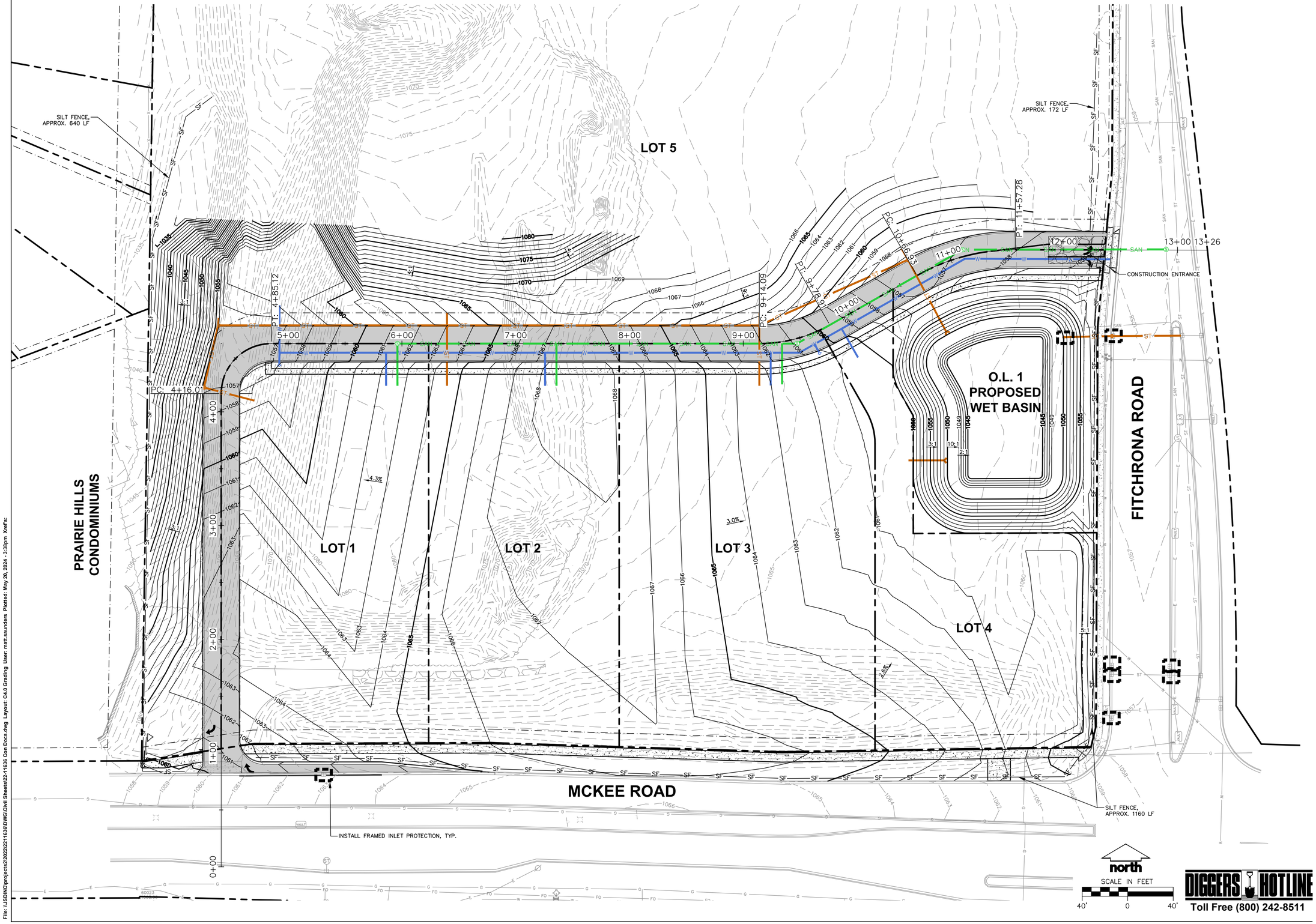

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Approved By: CD

SHEET TITLE:
GRADING AND EROSION CONTROL PLAN

SHEET NUMBER:
C4.0

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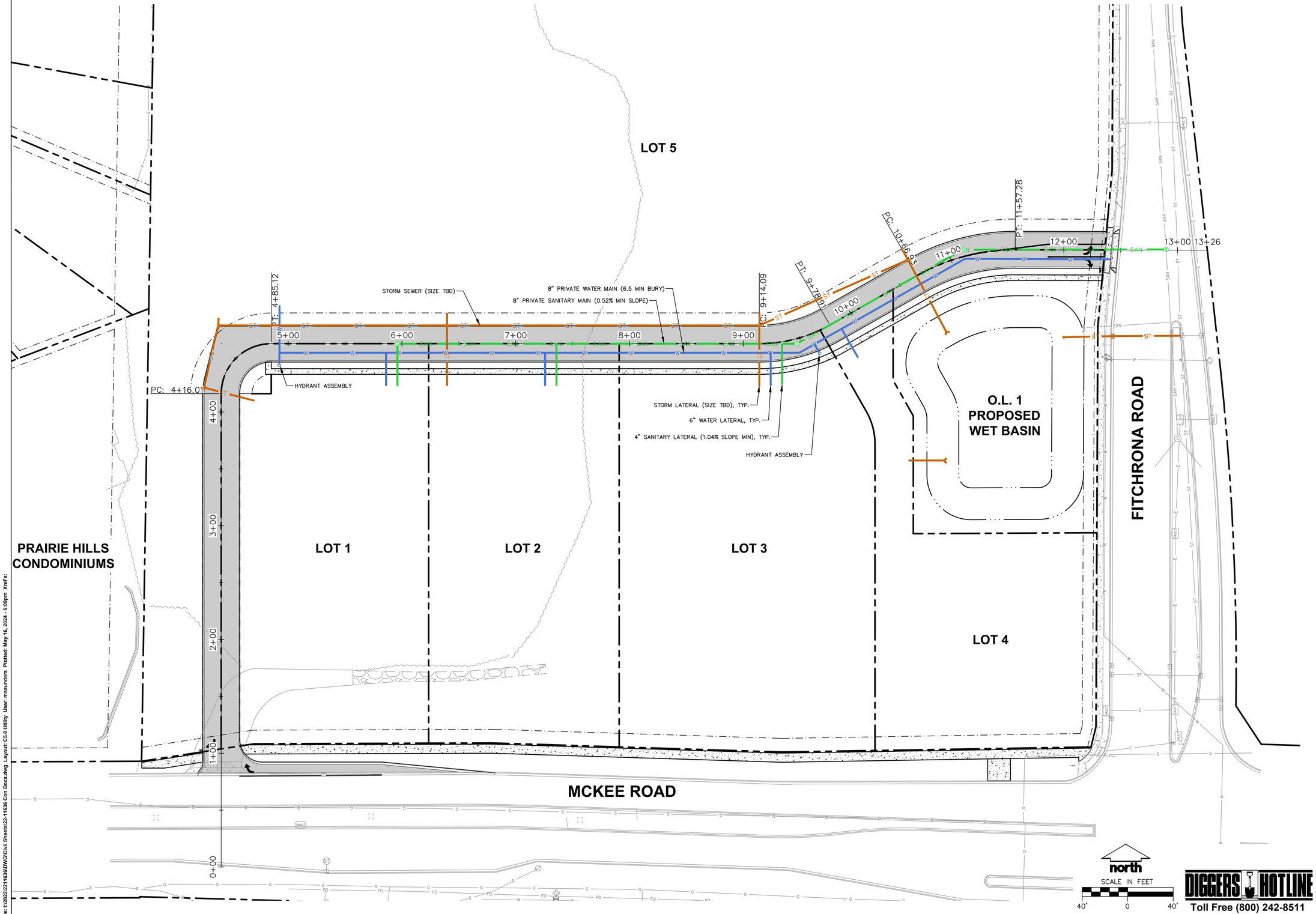

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Reviewed By:
Approved By: CD

SHEET TITLE:
UTILITY PLAN

SHEET NUMBER:
C5.0

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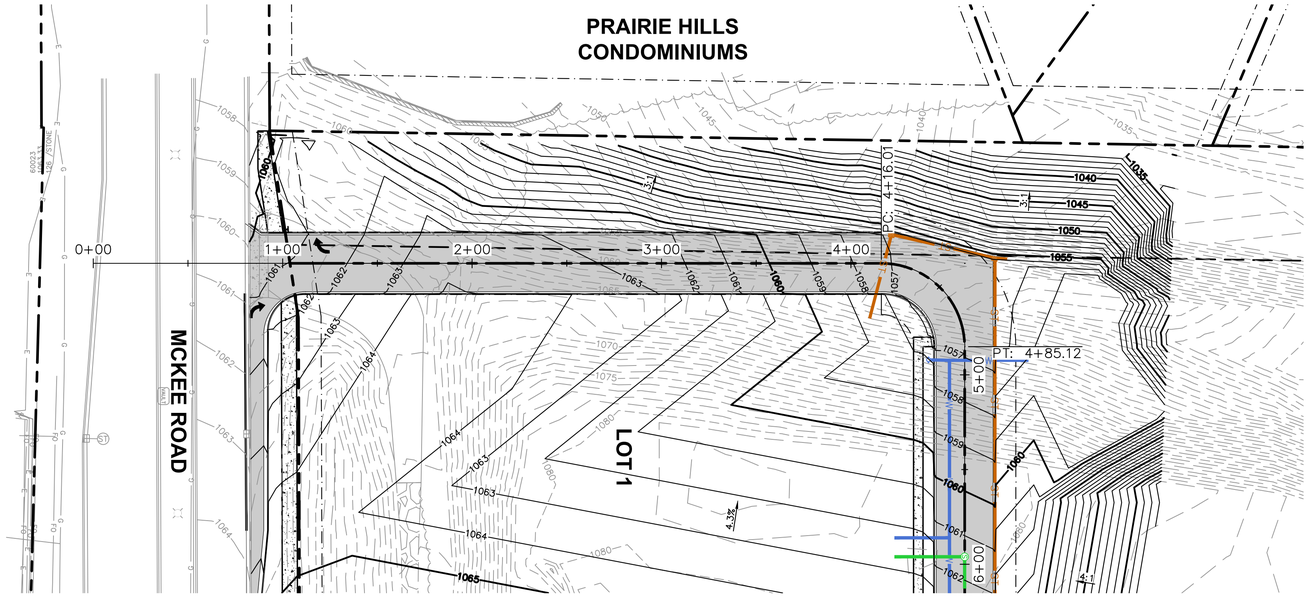

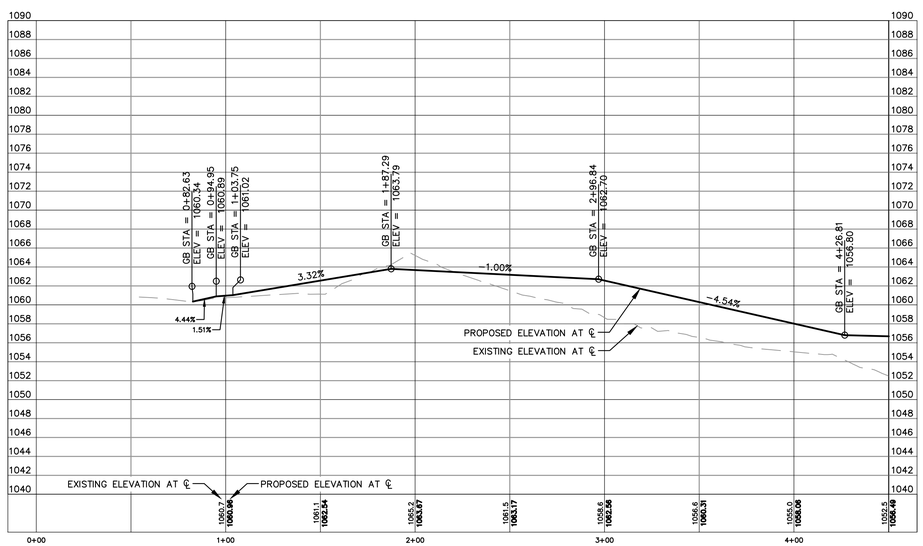

north

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22x34 = 40 SCALE
11x17 = 80 SCALE

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Reviewed By:
Approved By: CD

SHEET TITLE:
STREET PLAN AND PROFILE

SHEET NUMBER:
C6.1

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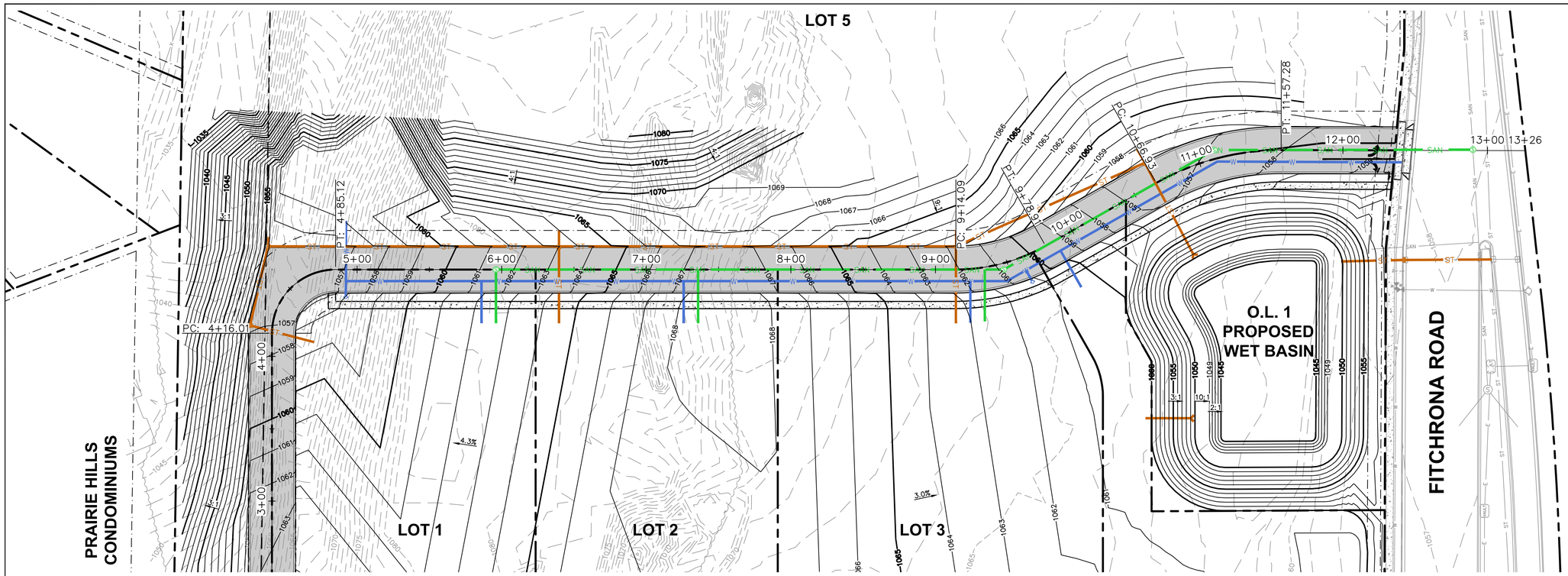

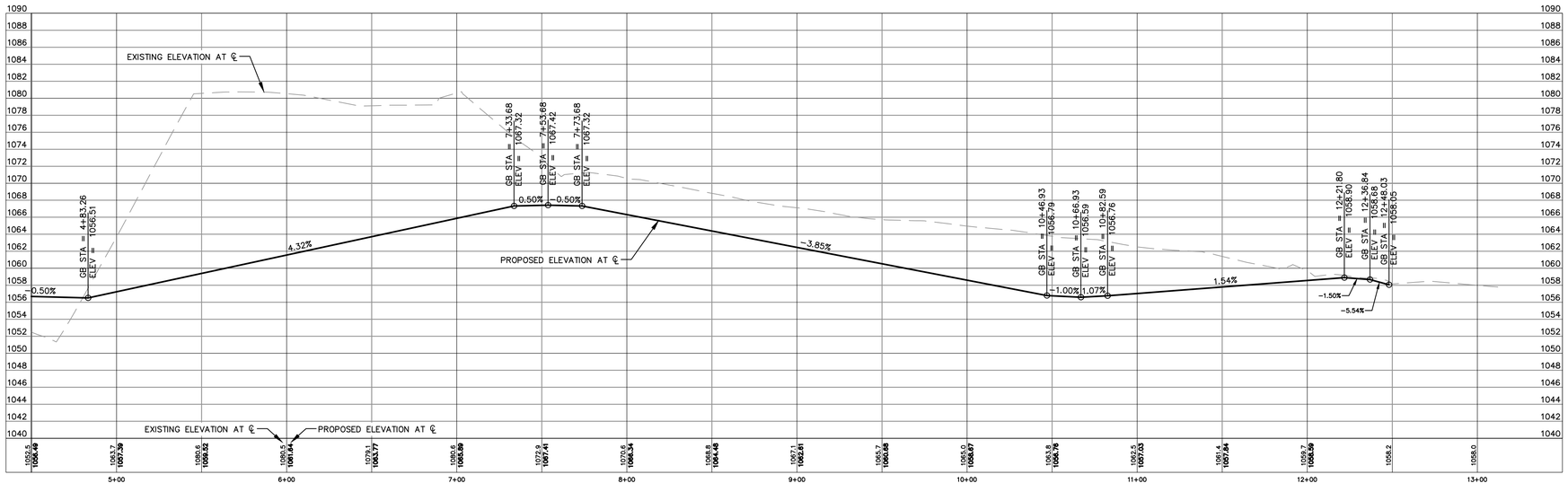

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SHEET TITLE:
STREET PLAN AND PROFILE

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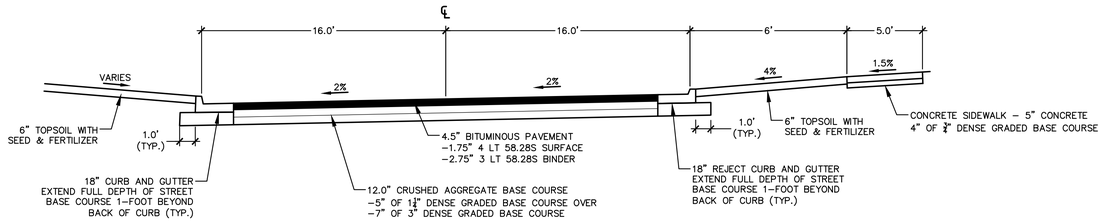

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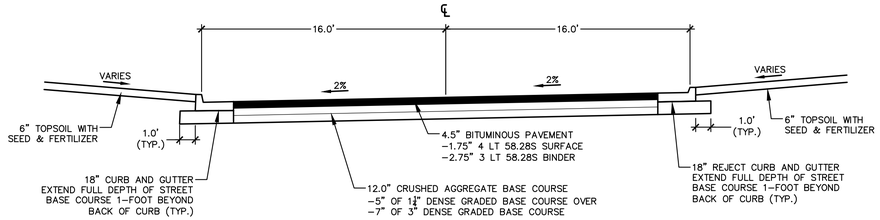

TYPICAL SECTION 2

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Designed By: MSS
Reviewed By:
Approved By: CD

SHEET TITLE:
DETAILS - TYPICAL SECTIONS

SHEET NUMBER:
C7.0

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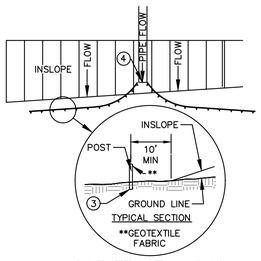
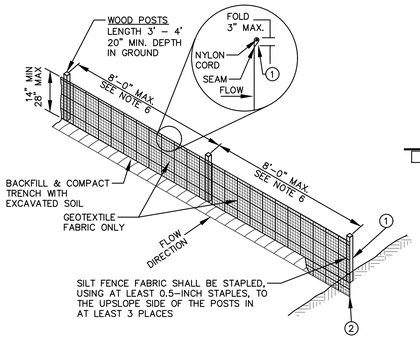
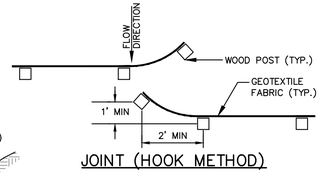
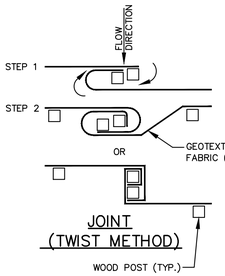


SILT FENCE ALONG SLOPES & OUTFALLS

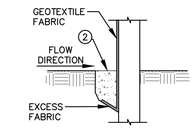




JOINT (HOOK METHOD)

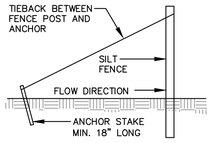


JOINT (TWIST METHOD)



NOTE:
ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS.

TRENCH DETAIL



SILT FENCE TIE BACK
(WHEN ADDITIONAL SUPPORT REQUIRED)

GENERAL NOTES:

1. SILT FENCE SHALL BE ANCHORED BY SPREADING AT LEAST 8-INCHES OF FABRIC IN A 4-INCH WIDE AND 6-INCH DEEP TRENCH OR 6-INCH DEEP V-TRENCH ON THE UPSLOPE SIDE OF THE FENCE. TRENCHES SHALL NOT BE EXCAVATED WIDER OR DEEPER THAN NECESSARY FOR PROPER INSTALLATION.
2. FOLD MATERIAL TO FIT TRENCH AND BACKFILL AND COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1.125-INCHES x 1.125-INCHES OF DRIED OAK OR HICKORY.
4. SILT FENCE TO EXTEND ABOVE THE TOP OF PIPE.
5. SILT FENCE CONSTRUCTION AND GEOTEXTILE FABRIC SHALL CONFORM TO WDNR TECHNICAL STANDARD 1056.
6. POST SPACING SHALL BE SELECTED BASED ON GEOTEXTILE FABRIC (8-FEET FOR WOVEN & 3-FEET FOR NON-WOVEN)

SILT FENCE

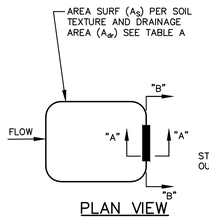
N.T.S.

REV. 7-01-2019

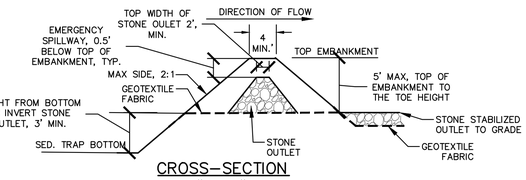
TABLE A:

SEE TEXTURE	
COURSE (SAND, LOAMY SAND, SANDY LOAM)	$A_S = 625*A_{dr}$
MEDIUM (LOAMS, SILT, SILTY LOAM)	$A_S = 1560*A_{dr}$
FINE (SANDY CLAY, SILTY CLAY, SILTY CLAY LOAM, CLAY)	$A_S = 5300*A_{dr}$

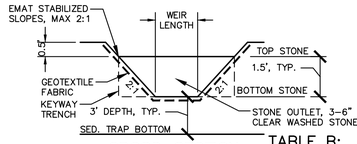
NOTES:
- ASSUME DRAINAGE AREA (A_{dr}) TO NEAREST 0.1 ACRES
- SURFACE AREA (A_S) IN SQUARE FEET



PLAN VIEW



CROSS-SECTION "A-A"



CROSS-SECTION "B-B"

NOTES:
1. REFER TO WDNR STORM WATER CONSTRUCTION TECHNICAL STANDARD NO. 1063, CURRENT EDITION FOR FURTHER DETAILS AND PROVISIONS FOR CONSTRUCTION, MAINTENANCE, AND OTHER CONSIDERATIONS

TABLE B:

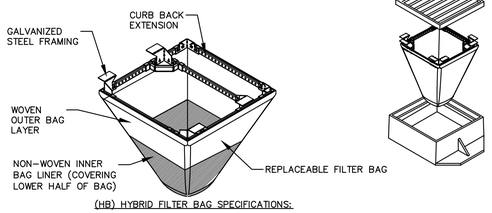
DRAINAGE AREA (A_{dr}) (acres)	WEIR LENGTH (FT)
1	4
2	6
3	8
4	10
5	12

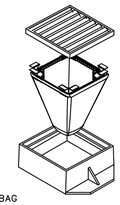
SEDIMENT TRAP

N.T.S.

REV. 3-17-2023

FLEXSTORM INLET FILTERS TO MEET DANE COUNTY EROSION CONTROL STANDARDS





(HB) HYBRID FILTER BAG SPECIFICATIONS:

INSTALLATION INSTRUCTIONS:
1. REMOVE GRATE FROM THE DRAINAGE STRUCTURE
2. CLEAN STONE AND DIRT FROM LEDGE (LIP) OF DRAINAGE STRUCTURE
3. DROP THE INLET FILTER THROUGH THE CLEAR OPENING SUCH THAT THE HANGERS REST FIRMLY ON THE LIP OF THE STRUCTURE
4. REPLACE THE GRATE AND CONFIRM IT IS NOT ELEVATED MORE THAN 1/8"

MAINTENANCE GUIDELINES:
1. EMPTY THE SEDIMENT BAG IF MORE THAN HALF FILLED WITH SEDIMENT AND DEBRIS
2. REMOVE THE GRATE, ENGAGE THE LIFTING POINTS, AND LIFT FILTER FROM THE DRAINAGE STRUCTURE.
3. DISPOSE OF SEDIMENT AND DEBRIS BY THE ENGINEERING OR MAINTENANCE CONTRACT 4. ALTERNATIVELY, AN INDUSTRIAL VACUUM CAN BE USED TO COLLECT SEDIMENT FROM THE FILTER BAG

CATCH-IT INLET FILTER (Temporary Inlet Protection)

Neenah Casting	Inlet Type	Grate Size	Opening Size	Bag Cap (ft^3)	Flow Ratings (CFS)		ADS P/N
					HB (Hybrid Bag)	Bypass	
3067	Curb Box	35.25 x 17.75	33.0 x 15.0	4.4	2.0	5.8	62LCBEXTHB
3246A	Curb Box	35.75 x 23.875	33.5 x 21.0	4.2	1.1	3.3	62LCB3624HB
3030	Square/Rect (SQ)	23 x 16	20.5 x 13.5	1.6	0.7	2.2	62MCB2316HB
3067-C	Square/Rect (SQ)	35.25 x 17.75	33 x 15	3.2	1.0	5.2	62LSQ3618HB
R-2501	Round (RD)	~26	~24	2.3	0.8	5.2	62MRD26HB
R-1772/2560	Round (RD)	22.25-23.5	20.5-21	1.5	0.6	4.6	62MRD22HB

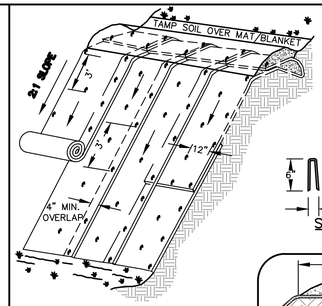
Woven and Non-Woven Geotextile Filter Bag Properties (Minimum Average Roll Values)

PROPERTY	TEST METHOD	WOVEN (OUTER)	NON-WOVEN (LINER)
TENSILE STRENGTH	ASTM D4632	350 x 225 Lbs	100 Lbs
ELONGATION	ASTM D4632	20% x 15%	50%
CBR PUNCTURE	ASTM D6241	1000 Lbs	65 Lbs
TRAPEZOIDAL TEAR	ASTM D4533	110 x 75 Lbs	45 Lbs
UV RESISTANCE	ASTM D4355	90%	70%
OPENING SIZE (AOS)	ASTM D4751	20 US STD SIEVE	40 US STD SIEVE
PERMITTIVITY	ASTM D4491	$1.5\ Sec^{-1}$	$2.0\ Sec^{-1}$
WATER FLOW RATE	ASTM D4491	200 gpi/min/ft^2	145 gpi/min/ft^2
MINIMUM FILTER BAG VOLUME		2 CUBIC FT	

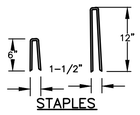
FRAMED INLET PROTECTION

N.T.S.

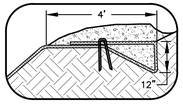
REV. 7-01-2019



NOTE:
MATS/BLANKETS SHOULD BE INSTALLED VERTICALLY DOWNSLOPE.



STAPLES



BERM

ISOMETRIC VIEW TYPICAL SLOPE SOIL STABILIZATION

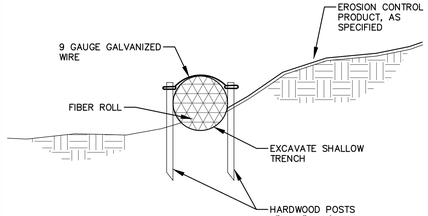
GENERAL NOTES:

1. EROSION MAT CONSTRUCTION SHALL BE IN ACCORDANCE WITH WISCONSIN DNR TECHNICAL STANDARD 1052 "NON-CHANNEL EROSION MAT".
2. ONLY WisDOT EROSION CONTROL PRODUCT ACCEPTABILITY LIST (PAL) APPROVED MATS SHALL BE ALLOWED. REFER TO EROSION CONTROL PLAN FOR EXACT MAT CLASSIFICATION.
3. APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS.
4. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.

EROSION MATTING

N.T.S.

REV. 11-19-2018



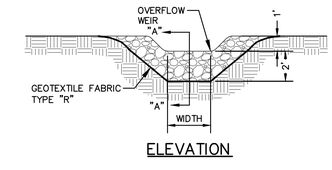
GENERAL NOTES:

1. EXCAVATE A SHALLOW TRENCH SLIGHTLY BELOW BASEFLOW OR A 4" TRENCH ON SLOPE CONTOURS.
2. PLACE THE ROLL IN THE TRENCH AND ANCHOR WITH 2" X 2" POSTS PLACED ON BOTH SIDES OF THE ROLL AND SPACED LATERALLY ON 2' TO 4' CENTERS. TRIM THE TOP OF THE POSTS EVEN WITH THE EDGE OF THE ROLL, IF NECESSARY.
3. NOTCH THE POSTS AND TIE TOGETHER, ACROSS THE ROLL, WITH 9 GAUGE GALVANIZED WIRE OR 1/8" DIAMETER BRAIDED NYLON ROPE.
4. PLACE SOIL EXCAVATED FROM THE TRENCH BEHIND THE ROLL AND HAND TAMP. PLANT WITH SUITABLE HERBACEOUS OR WOODY VEGETATION AS SPECIFIED.

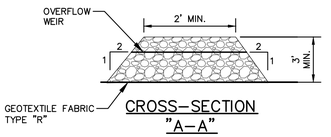
FIBER SILT SOCK

N.T.S.

REV. 12-7-2018



ELEVATION



CROSS-SECTION "A-A"

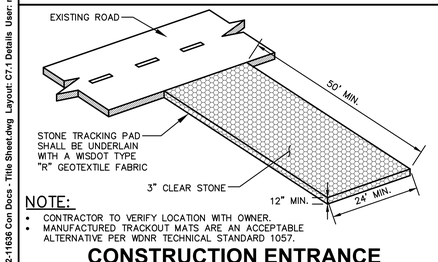
GENERAL NOTES:

1. STONE DITCH CHECKS SHALL BE CONSTRUCTED OF A WELL-GRADED ANGULAR STONE, A D50 OF 3 INCH DIAMETER OR GREATER, SOMETIMES REFERRED TO AS BREAKER RUN OR SHOT ROCK.
2. EXTEND DITCH CHECK ACROSS CHANNEL OPENING TO MEET SWALE/DITCH SIDE SLOPES. WHERE CHANNEL IS LESS THAN 3 FEET DEEP, REDUCE WEIR HEIGHT TO 1 FOOT AND INCREASE THE TOP OF DITCH CHECK FROM 2 FEET TO 4 FEET.

STONE DITCH CHECK

N.T.S.

REV. 7-31-2018

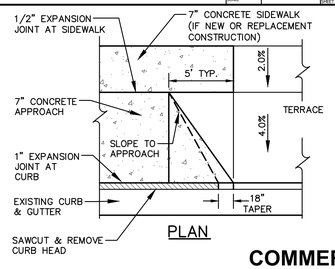


NOTE:
- CONTRACTOR TO VERIFY LOCATION WITH OWNER.
- MANUFACTURED TRACKOUT MATS ARE AN ACCEPTABLE ALTERNATIVE PER WDNR TECHNICAL STANDARD 1057.

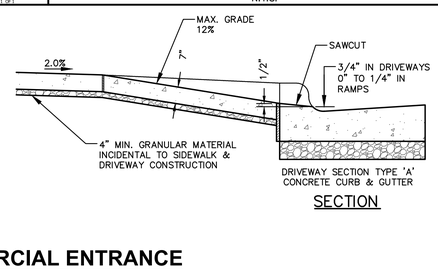
CONSTRUCTION ENTRANCE

N.T.S.

REV. 04-24-2024



PLAN

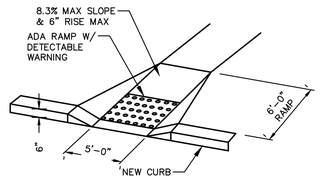


SECTION

COMMERCIAL ENTRANCE

N.T.S.

REV. 2-12-2021



ADA ACCESSIBLE RAMP - INLINE

N.T.S.

REV. 11-20-2018

FLEXSTORM CATCH IT

TECH	DRAWN BY	CHECKED
C		

APPROVED: IPP Flexstorm HD Specifications

SHEET 1 OF 1

JSD
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P. 608.848.5060

CLIENT:
FITCHBURG PARTNERS, LLC.

CLIENT ADDRESS:
80 OTTAWA AVE. NW, SUITE 410
GRAND RAPIDS, MI 49503

PROJECT:
JAMESTOWN QUARRY

PROJECT LOCATION:
2975 KAPEC ROAD
DANE COUNTY
FITCHBURG, WI 53719

PLAN MODIFICATIONS:

#	Date:	Description:
1	05.21.24	PRELIMINARY PLAT
2		
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Designed By: MSS
Reviewed By:
Approved By: CD

SHEET TITLE:
DETAILS

SHEET NUMBER:
C7.1

JSD PROJECT NO: 22-11636

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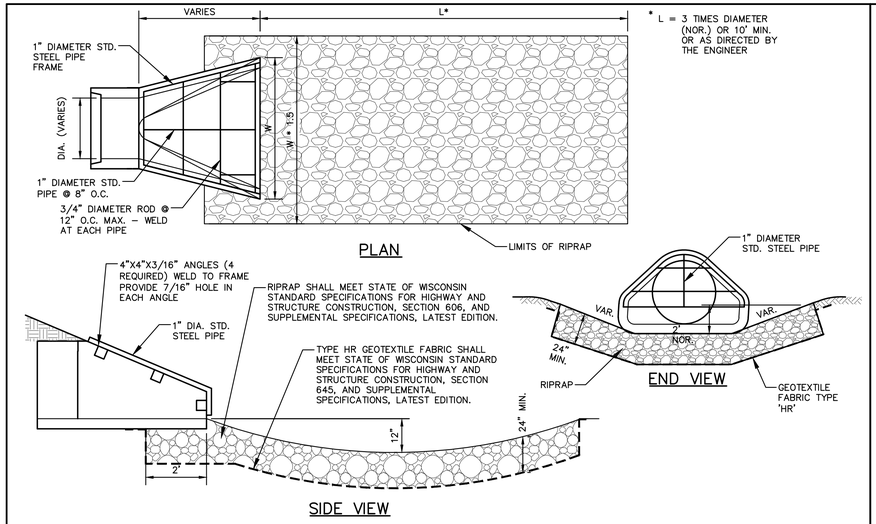
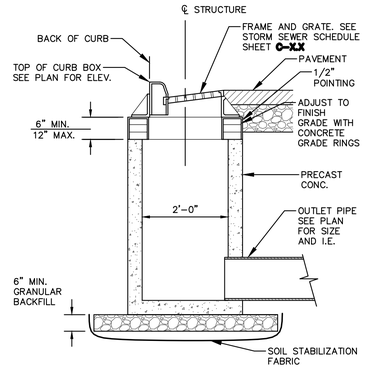


APRON ENDWALL W/ GRATE - RIPRAP

N.T.S.

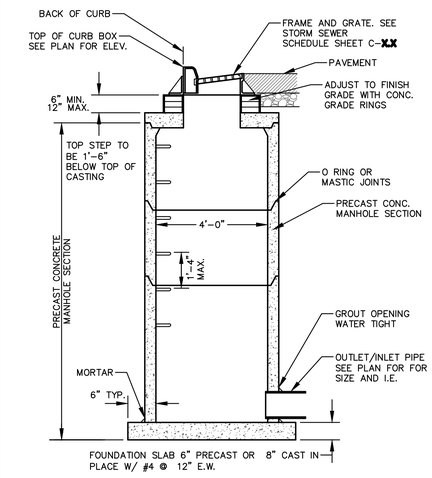
REV. 12-7-2018



STORM INLET

N.T.S.

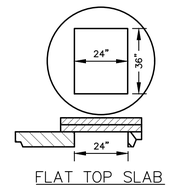
REV. 11-26-2018



4' CATCH BASIN (CURB INLET)

N.T.S.

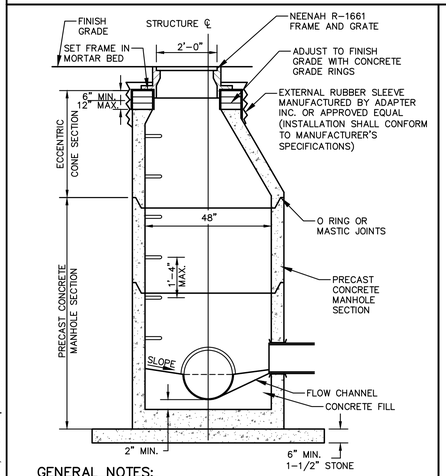
REV. 12-7-2018



FLAT TOP SLAB

GENERAL NOTES:

1. MANHOLE CONSTRUCTION TO MEET REQUIREMENTS OF ASTM C478.
2. PROVIDE FLAT TOP SLAB FOR MANHOLES 5' OR LESS IN DEPTH. FLAT TOP SLABS TO BE IN-BELL TYPE.
3. JOINTS SHALL BE WATERTIGHT. USE BUTYL RUBBER GASKET.
4. USE MORTAR FOR PIPE CONNECTIONS.



GENERAL NOTES:

1. MANHOLE CONSTRUCTION TO MEET REQUIREMENTS OF ASTM C478.
2. JOINTS SHALL BE WATERTIGHT. USE BUTYL RUBBER GASKET.
3. USE MORTAR FOR PIPE CONNECTIONS.
4. ALL MANHOLES SHALL HAVE RUBBER CHIMNEY BOOT SEALS.

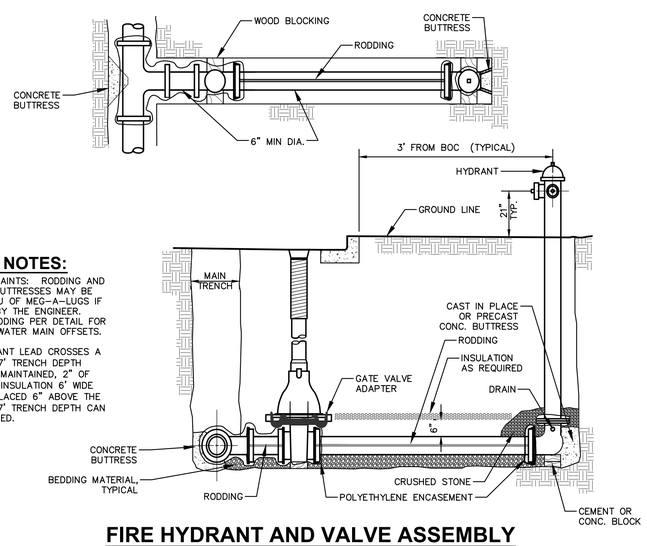
SANITARY SEWER MANHOLE

N.T.S.

REV. 12-6-2018

GENERAL NOTES:

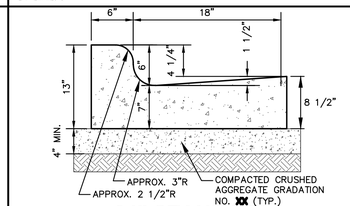
1. JOINT RESTRAINTS: RODDING AND CONCRETE BUTTRESSES MAY BE USED IN LIEU OF MEG-A-LUGS IF APPROVED BY THE ENGINEER. PROVIDE RODDING PER DETAIL FOR STRAPPING WATER MAIN OFFSETS.
2. WHEN HYDRANT LEAD CROSSES A DITCH & A 7' TRENCH DEPTH CANNOT BE MAINTAINED, 2" OF STYROFOAM INSULATION 6' WIDE SHALL BE PLACED 6" ABOVE THE PIPE UNTIL 7' TRENCH DEPTH CAN BE MAINTAINED.



FIRE HYDRANT AND VALVE ASSEMBLY

N.T.S.

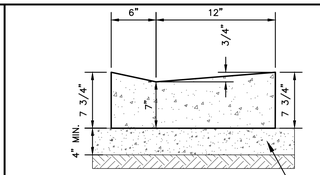
REV. 12-03-2018



24" STANDARD CURB & GUTTER

N.T.S.

REV. 11-20-2018



18" DRIVEWAY SECTION CURB & GUTTER

N.T.S.

REV. 11-19-2018

18" STANDARD CURB & GUTTER

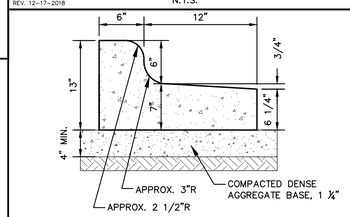
N.T.S.

REV. 12-17-2018

CONCRETE INLET COLLAR

N.T.S.

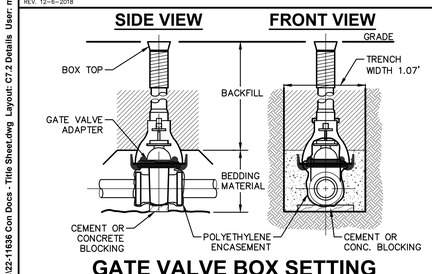
REV. 11-20-2018



18" REJECT CURB & GUTTER

N.T.S.

REV. 12-17-2018



GATE VALVE BOX SETTING

N.T.S.

REV. 12-04-2018

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MADISON REGIONAL OFFICE
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Designed By: MSS
Reviewed By:
Approved By: CD

SHEET TITLE:
DETAILS

SHEET NUMBER:
C7.2

JSD PROJECT NO: 22-11636

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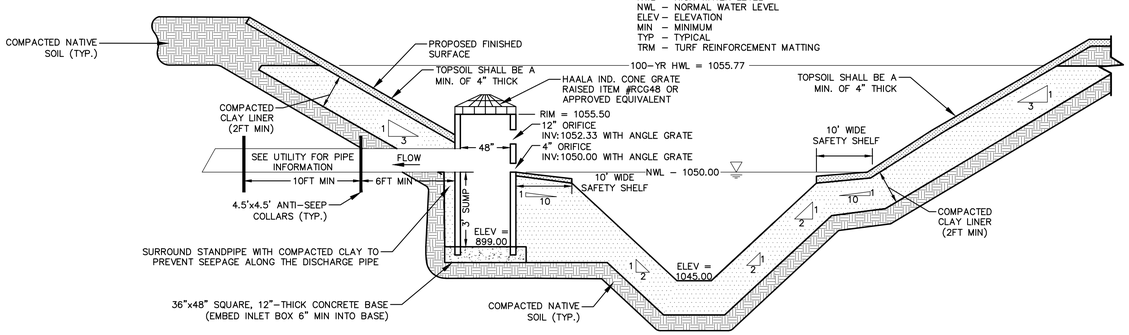
DETAIL ABBREVIATIONS:

HWL – HIGH WATER LEVEL
NWL – NORMAL WATER LEVEL
ELEV – ELEVATION
MIN – MINIMUM
TYP – TYPICAL
TRM – TURF REINFORCEMENT MATTING



GENERAL NOTES:

1. ALL CONSTRUCTION SHALL MEET THE SPECIFICATIONS OF "WDNR WET DETENTION BASIN TECHNICAL STANDARD 1001".
2. ALL WORK TO BE CONDUCTED IN CONFORMANCE WITH THE STORM WATER MANAGEMENT PLAN FOR THE PROJECT SITE AS APPROVED BY THE REGULATORY ENGINEER OF RECORD.
3. OWNER OR CONTRACTOR MUST CONSULT LANDSCAPE ARCHITECT OR ECOLOGICAL PLANNING AGENCY FOR APPROPRIATE PLANTS AND PLANTING CONFIGURATIONS.
4. CLAY LINER SHALL BE A MINIMUM OF 2-FEET THICK. CLAY SHALL BE COMPACTED AT ±2.0% OPTIMAL MOISTURE CONTENT TO 90% MODIFIED PROCTOR. MEDIUM STIFF TO STIFF CLAYS PRESENT IN-PLACE AT THE POND SIDE SLOPES OR BOTTOM OR OTHER ONSITE MEDIUM STIFF TO STIFF CLAYS MAY BE USED AT THE DISCRETION OF THE GEOTECHNICAL ENGINEER OF RECORD.
5. FOR CONSTRUCTED EMBANKMENTS WHERE THE PERMANENT POOL IS PONDED 3-FEET OR MORE AGAINST THE EMBANKMENT, THERE SHALL BE A CORE TRENCH OR KEYWAY ALONG THE CENTERLINE OF THE EMBANKMENT UP TO THE PERMANENT POOL ELEVATION. THE CORE TRENCH OR KEYWAY SHALL BE A MINIMUM OF 2-FEET DEEP AND 8-FEET WIDE WITH A SIDE SLOPE OF 1:1 OR FLATTER.
6. CONTRACTOR SHALL POSITION ANTI-SEEP COLLAR SUCH THAT THE COLLARS ARE COMPLETELY CONTAINED WITHIN EMBANKMENT.
7. CONTRACTOR SHALL FIT STANDPIPE WITH REMOVABLE CONSTRUCTION ORIFICE PLATE OVER THE PERMANENT DEWATERING ORIFICE. THE CONSTRICTION ORIFICE SHALL REMAIN IN PLACE UNTIL 70% VEGETATION IS ESTABLISHED OVER THE CONTRIBUTING AREA OF THE POND.
8. IMMEDIATELY INSTALL FILTER FABRIC OVER ALL OUTLETS TO PREVENT SEDIMENT DEPOSITION IN THE PIPING. (REMOVE FOLLOWING CONTRIBUTING AREA STABILIZATION)
9. THE TRASH GRATE OVER THE PERMANENT DEWATERING ORIFICE SHALL BE ADDED FOLLOWING REMOVAL OF THE CONSTRUCTION ORIFICE.

NOTE:

THE STORMWATER MANAGEMENT FEATURES CONTAINED WITHIN THIS PLAN SET HAVE BEEN DESIGNED IN ACCORDANCE WITH APPLICABLE STANDARDS SET FORTH IN WISCONSIN DNR NR151 AND LOCAL ORDINANCES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE PROPER CONSTRUCTION PRACTICES HAVE BEEN UTILIZED AND THAT STORMWATER MANAGEMENT FEATURES HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH APPROVED DESIGN PLANS. JSD PROFESSIONAL SERVICES, INC. (JSD) SHALL NOT BE LIABLE FOR ANY CONSTRUCTION PRACTICES OR INSTALLATION WHICH DEVIATES FROM THE APPROVED PLAN SET. ONCE THE OWNER HAS PROVIDED FINAL APPROVAL TO THE WORK PERFORMED BY THE CONTRACTOR AND ENSURED COMPLIANCE WITH THE PLAN, IT IS THE OWNER'S RESPONSIBILITY TO MAINTAIN STORMWATER MANAGEMENT FEATURES IN ACCORDANCE WITH THE RECORDED MAINTENANCE AGREEMENT. PROPER OPERATION IS DEPENDENT ON A MULTITUDE OF VARIABLES INCLUDING WEATHER. THESE COMPONENTS REQUIRE ONGOING MAINTENANCE FOR WHICH THE OWNER IS RESPONSIBLE. JSD TAKES NO RESPONSIBILITY FOR PROPER OPERATION OF THE WATER QUALITY COMPONENTS.

WET BASIN CROSS SECTION

N.T.S.

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CLIENT ADDRESS:
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PROJECT:
JAMESTOWN QUARRY

PROJECT LOCATION:
2975 KAPEC ROAD
DANE COUNTY
FITCHBURG, WI 53719

PLAN MODIFICATIONS:

#	Date:	Description:
1	05.21.24	PRELIMINARY PLAT
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REPORT OF GEOTECHNICAL STUDY
PROPOSED PICK 'N SAVE MARKETPLACE (PS-902)
INTERSECTION OF MCKEE AND FITCHRONA ROADS
FITCHBURG, WISCONSIN

Submitted to:

The Kroger Company

Submitted by:

Wood Environment & Infrastructure Solutions, Inc.
Nashville, Tennessee

October 19, 2018

Project No. 2424-18-135

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October 19, 2018

Mr. Jameson Snider
Engineering Project Manager
The Kroger Company
Roundy's Supermarket Division
875 E. Wisconsin Avenue
Milwaukee, Wisconsin 53202
Jameson.Snider@Roundys.com

Re: Report of Geotechnical Study
Proposed Pick 'n Save Marketplace (PS-902)
Intersection of McKee and Fitchrona Roads
Fitchburg, Wisconsin
Project No. 2424-18-135

Mr. Snider,

Wood Environment & Infrastructure Solutions, Inc. (Wood) has completed the authorized geotechnical study and herewith submits the data, our comments, and recommendations. Our services were performed in accordance with the terms of our September 4, 2018 proposal. The scope of services includes general subsurface exploration and the development of general recommendations to address geotechnical engineering issues across the area of proposed construction.

Wood appreciates this opportunity to be of service to you. At your convenience, we are available to discuss the details of this report and any questions that you may have.

Sincerely,
Wood

Nathan Long, PE, PG (TN)
Senior Geotechnical Engineer

Neill Belk, PhD, PE
Senior Geotechnical Engineer

wood.

TABLE OF CONTENTS

Page

1.0 INTRODUCTION 1
2.0 PROJECT INFORMATION 1
3.0 SITE HISTORY 2
4.0 EXPLORATION AND TESTING 4
5.0 SITE AND SUBSURFACE CONDITIONS 5
5.1 Area Geology 4
5.2 Subsurface Conditions 4
5.2.1 Former Quarry Excavation Footprint (East Portion of the Site) 5
5.2.2 Outside of Former Quarry Excavation Footprint (West Portion of the Site) 5
5.3 Groundwater 6
6.0 GEOLOGIC HAZARDS 7
6.1 Undocumented Fill 7
6.2 Seismic Hazard 7
7.0 GEOTECHNICAL COMMENTS AND RECOMMENDATIONS 7
7.1 Geotechnical Assessment 7
7.1.1 Fuel Center and Pavement Areas 7
7.1.2 Marketplace Building 8
7.2 Site Preparation 10
7.3 Foundation Design 12
7.3.1 Marketplace Building (Option 1) and Fuel Center 12
7.3.2 Marketplace Building (Option 2) 13
7.4 Slabs-on-grade 13
7.5 Groundwater Control 14
7.6 Seismic Design 14
7.7 Pavement Design 14
7.8 Corrosion 15
8.0 REPORT LIMITATIONS 16
9.0 CLOSURE 16

LIST OF APPENDICES

GEOPROFESSIONAL BUSINESS ASSOCIATION DOCUMENT ..... APPENDIX 1
BORING LOCATION PLAN, KEY TO SYMBOLS AND DESCRIPTIONS,
BORING LOGS, AND CROSS SECTIONS ..... APPENDIX 2
GEOTECHNICAL LABORATORY TEST RESULTS ..... APPENDIX 3

1.0 INTRODUCTION

Wood Environment & Infrastructure Solutions, Inc. (Wood) has completed a geotechnical study for this project and herewith submits the data and our recommendations. We performed the scope of services in accordance with our September 4, 2018 proposal and agreement. The objectives of the geotechnical study were to explore the general subsurface conditions within the proposed construction area and to provide comments and recommendations for site work and design criteria for foundations, slabs, and pavements.

We prepared this report with the assumption that the design will be in accordance with applicable standards and codes, regulations of authorities having jurisdiction, and prudent engineering practices. Further, our recommendations and opinions expressed in this report are only applicable to the subject project. There should also be an ongoing liaison between us and the design team during both the design and construction phases of the project to ensure that you interpret and implement the recommendations in this report correctly. In addition, you should contact us immediately if any further clarification and/or elaboration are needed concerning the geotechnical aspects of this project. We have attached important information prepared by the Geoprofessional Business Association (GBA) regarding studies of the type performed for you to review in Appendix 1.

2.0 PROJECT INFORMATION

We based our understanding of the project on the drawing titled "Concept Site Plan Option 1," dated August 24, 2018, prepared by Sevan Multi-Site Solutions, and provided to us by The Kroger Company. The drawing depicts the proposed improvement locations at the site.

The project consists of constructing a new Pick 'n Save Marketplace at the northwest quadrant of the intersection of McKee Road and Fitchrona Road in Fitchburg, Wisconsin. The planned development will also include associated pavements, a fuel center, and a detention pond. Our study did not include the outlots located to the north and south of the proposed Pick 'n Save development. The marketplace building is planned for the west end of the site and will consist of a single-story structure with a footprint of about 115,000 square feet. Based on our experience with similar structures, we have assumed that the building will be a steel-framed building with a concrete slab-on-grade and spread footings. Also, we assume that maximum structural loads for the building will be 115 kips for columns and 3.5 kips per foot for walls.

The fueling center is planned for the southeast corner of the site and situated approximately 300 feet north of the intersection of McKee Road and Fitchrona Road and will include a fuel island canopy with up to nine fuel dispensers, a kiosk, two underground storage tanks (USTs), and associated pavement areas. The detention pond is planned for the northeast corner of the site, adjacent to Fitchrona Road.

The proposed marketplace building and fuel center will be surrounded by associated driveways and parking lots. We have not been provided with detailed information relating to anticipated traffic loadings and frequencies likely associated with operation of the facility. In the absence of detailed information, we have assumed less than 110,000 ESAL's (18 kip Equivalent Single Axle

Loads) for light duty pavements and less than 210,000 ESAL's for heavy duty pavements. This loading information is based on a theoretical life of 20 years for the pavements.

We have not been provided with a grading plan for the site, but we estimate that cut and fill thicknesses up to 20 feet each will be required to reach final grades across the western half of the site. We anticipate that minimal grading (i.e., less than two feet of cut and/or fill) will be required within the east half of the site, except at the proposed detention pond and UST excavation(s). We expect cuts up to 15 feet in these areas. We note that the provided site plan did not indicate any retaining walls, therefore these type of structures were not included in our current scope of services. If retaining walls are added to this project at a later, then we can provide design and construction recommendations at that time.

3.0 SITE HISTORY

Information provided by Kroger and our review of aerial photography (see our Phase I ESA for the site, dated June 21, 2018) indicates that the site was formerly utilized as a rock quarry between at least 1968 and 2014 (See Figure 1). The primary excavation for the quarry occupied the eastern half of the site. The planned Pick 'n Save improvements for this eastern area consist of pavements, the fuel center, and the detention pond. We note that the excavation extended beyond the Pick 'n Save site boundaries to the north and east. Based on the aerial photographs, the slopes along the west and south sides of the excavation appear to have had very steep, near-vertical inclinations.

Figure 1 – Aerial View of Site (Google Earth, 2014)

Based on four field reports prepared by CGC, Inc (CGC), we understand that the primary quarry excavation was backfilled with imported soils between April 2014 and November 2017 (field

reports dated between January 2015 and April 2018). The field reports document the intermittent field density testing of the fill. The reports included the field density test results for 245 tests. The test elevations ranged from 1,026.0 feet to 1071.6 feet. CGC generally performed the tests on 6- to 12-inch lift intervals, except for the south end of the quarry above elevation 1,035.0 feet. This area was tested on approximately 1- to 4-foot intervals between elevation 1,055.0 feet and 1,066.0 feet. There were no field density tests performed between 1,035.0 feet and 1,055.0 feet. The quarry backfill materials generally consisted of silty sand with gravel, but also included some lean clay and sand with silt/gravel.

Based on CGC's field reports, the backfill specifications required a minimum compaction level of 92% below elevation 1,050.0 feet and a minimum compaction level of 95% above elevation 1,050.0 feet. The compaction levels were based on the maximum dry density of the soils as determined by the modified Proctor compaction test.

The field density test results indicate that 230 of the 245 test results either initially met the specified compaction requirement or had a retest meet the specification requirement after aeration and additional compaction. However, Test Numbers 231 through 245, which were performed above elevation 1,055.0 feet at the south end of the quarry, did not meet the compaction requirements. The compaction percentage for these tests ranged from 77% to 93%. CGC noted in their final field report that these failing tests were performed within test pits after completing the quarry backfill. Because the area had been completely backfilled, the contractor was not able to apply additional compaction to the fill. CGC indicated that the majority of this area was pre-loaded with stockpile material that extended up to about 25 feet above the existing ground surface. Once the stockpile was removed, CGC had a local surveyor install 9 monitoring points to evaluate settlement within the unsatisfactorily compacted backfill. In their field report dated April 24, 2018, CGC included monitoring point elevations surveyed seven times between December 19, 2017 and April 11, 2018. The monitoring indicated up to ⅜-inch of settlement during this time period, and settlement had generally tapered off after the first two to three months.

Figure 2 – Aerial View of Site (USGS, 1992)

In addition to the quarry excavation and backfilling previously discussed, historical aerial photography indicates that additional earthwork has taken place in the western half of the site (See Figure 2 above). The aerial photography indicates that earthwork in this area lasted from at least years 1976 to 2005. We are unaware of the purpose and extent of this earthwork, but it appears that a large excavation was made during this period then backfilled in the mid-2000s. Unlike the fill placed in the abandoned quarry excavation, we do not have records documenting fill placement in the western half of the site.

4.0 EXPLORATION AND TESTING

Our exploration included advancing 31 geotechnical soil borings at the site within the planed building footprint, fuel center, pavement areas, and detention pond (see Table 1). Appendix 2 contains a Boring Location Plan, which shows the approximate boring locations in relation to the proposed construction locations. A member of our professional staff located the requested boring locations in the field by using a handheld global positioning system (GPS) device and pacing distances from existing features. After completing the exploration, our subcontractor's survey crew surveyed the actual boring locations to determine coordinates and elevations. They also surveyed the settlement monuments discussed in Section 3.0.

Table 1 – Boring Locations

Location	Number of Borings	Boring Numbers
Fuel Center	3	B-1 through B-3
Pick 'n Save Marketplace Building	11	B-4 through B-13, B-31
Pavement Areas	14	B-14 through B-27
Detention Pond	3	B-28 through B-30

We subcontracted with Testing Service Corporation (TSC) to perform the drilling for the geotechnical soil borings. TSC power augered the borings through the overburden and obtained soil samples at various intervals in general accordance with ASTM D1586 (*Standard Test Method for Standard Penetration Test (SPT) and Split-Barrel Sampling of Soils*). Additionally, we collected relatively undisturbed samples of some of the cohesive soils in general accordance with ASTM D1587 (*Standard Practice for Thin-Walled Tube Sampling of Fine-Grained Soils for Geotechnical Purposes*). We extended the borings to their planned exploration depths, which were between 15 and 50 feet below ground surface. A member of our professional staff was on-site to document the exploration and log the soil samples in the field. We field classified soil samples with respect to material type and consistency. Upon completion of drilling, we checked each boring for the presence of groundwater and backfilled the borings with auger cuttings.

We returned the collected soil and rock samples to our Geotechnical and Construction Materials Laboratory in Nashville, Tennessee, where we tested select samples to assess the soils' classification and index properties, such as natural moisture content, grain size distribution, and Atterberg limits. Additionally, we performed unconfined compression, consolidation, soil pH, soil electrical resistivity, and California bearing ratio (CBR) tests. The laboratory testing results are presented in Appendix 3.

5.0 SITE AND SUBSURFACE CONDITIONS

The site is bordered by McKee Road to the south, by Fitchrona Road to the east, undeveloped land and residential properties to the north, and residential properties to the west. The ALTA/NSPS Land Title Survey for the site (dated July 9, 2018 and prepared by KL Engineering) indicates that underground utilities are located within the right-of-way of both roadways bounding the site.

The site is undeveloped and consists of two distinct areas. The east end of the site (former quarry excavation footprint) is relatively flat and covered with bare soil and weeds (Photo 1). A detention pond is located within this area at the northeast corner of the site. Based on the ALTA/NSPS survey, ground surface elevations within the east half of the site generally range from about 1,060 feet along Fitchrona Road to 1,070 feet near the center of the site.

The west half of the site generally consists of an elevated surface near the center of the area. The top of the elevated area is about 450 feet long and 150 feet wide. The ground surface surrounding the high spot slopes down at inclinations between about 1H:1V and 4H:1V. Based on the ALTA/NSPS survey, ground surface elevations range from about 1,034 feet along the west boundary of the site to 1,084 feet within the elevated area. The west half of the site is generally hummocky with densely vegetated with trees (up to 12-inch diameter) and underbrush, except at the north and south ends of the site. We observed occasional pieces/slabs of concrete on the ground surface within the wooded areas. An asphalt access driveway is located at the southwest corner of the site and extends about 100 feet into the site.

Photo 1 – View looking north (9/20/18)

Photo 2 –Along west boundary (9/20/18)

5.1 Area Geology

The project site is located in the Eastern Ridges and Lowland geographical province of Wisconsin (Martin, 1916). The Glacial Geology of Dane County, Wisconsin map (Wisconsin Geological & Natural History Survey, 1979) indicates the site is underlain by ground moraine soils consisting of till deposited as a relatively flat or rolling surface along the base of the glacier. As noted earlier, the site was former used as a quarry and our subsurface exploration indicates that much of the glacial till at the site was likely removed during quarry operation.

The Preliminary Bedrock Geology of Dane County, Wisconsin map (Wisconsin Geological & Natural History Survey, 2013) indicates that the site is located along the contact between the Ancell Group and the Sinnipee Group. The contact between these geologic units appears to be between about elevation 1,060 feet and 1,070 feet based on a comparison between the referenced geologic map and the USGS topographic map of the Madison West Quadrangle (USGS, 1983). The Ancell Group is the lower unit and is mapped along the eastern half of the site. The majority of this group consists of the St. Peter Formation, which consists of poorly cemented, clean, medium-grained quartz sandstone overlying shale and shaly sandstone. The geologic map identifies this area as being a quarry. The Ancell Group is overlain by the Sinnipee Group, which is mapped along the western half of the site. The lowest member of the Sinnippe Group is the Platteville Formation, which is about 80 feet thick. This formation consists of dolomite and shaly dolomite. Regionally extensive faults lie approximately 2 and 5 miles to the south of the site.

5.2 Subsurface Conditions

Below is a summary of the subsurface conditions encountered in each of the site areas. The Boring Logs in Appendix 2 contain our descriptions and interpretations of the materials encountered at each boring location.

5.2.1 Former Quarry Excavation Footprint (East Portion of the Site)

The 3 fuel center borings, 3 detention pond borings, and 10 of the pavement borings (B-17 through B26) were performed within the footprint of the former quarry excavation. Each of the borings drilled in this area initially encountered a layer of gravelly sand with cobbles to a depth of about 6 inches. Below the surficial gravelly sand, each boring encountered existing fill or possible fill materials to depths between 12 and 47 feet below ground surface. We note that 9 of the borings were terminated at a depth of 15 feet without penetrating the fill. The existing fill typically consisted of sandy clay and silty/clayey sand varying amounts of gravel. The clay was typically medium stiff to stiff, and the sands were typically loose to medium dense. However, some of the borings at the south end of the site encountered soft clays and very loose sands.

Below the fill, Borings B-1, B-2, B-3, B-18, B-20, B-24, and B-26 encountered native soils and potential bedrock to boring termination between 15 and 50 feet below ground surface. The soils typically consisted of very dense sand with varying amounts of silt and sandstone fragments. We note that this material is possibly a weakly cemented or brittle sandstone that was able to be augered through with our onsite drill rig.

Laboratory Testing

We performed Atterberg limits and grain size testing on eight test samples (seven existing fill and one native) of the materials encountered within the east half of the site. The testing indicated that one of the existing fill samples was lean clay with sand, four were silty sand, and one was clayey sand. The native soil sample was silty sand. Natural moisture contents for 16 test samples ranged from about 8 to 18 percent (average of about 11 percent).

Strength testing performed on one relatively undisturbed sample of clayey sand from Boring B-20 yielded an unconfined compressive strength of 1,540 psf.

We also collected a bulk sample of the upper 15 feet of auger cuttings at Borings B-29 and B-30 for standard Proctor testing. The bulk sample from the combined auger cuttings was composed of silty sand. The optimum moisture content of the sample was 9.5% with a maximum dry density of 127.3 pounds per cubic foot (pcf). The CBR test indicated a CBR value of about 4.8 for soils compacted to 98% of the maximum dry density. We measured the electrical resistivity of the bulk sample in the laboratory to be 1,580 ohm-centimeters and the pH to be 9.19.

5.2.2 Outside of Former Quarry Excavation Footprint (West Portion of the Site)

The 11 marketplace building borings and 4 of the pavement borings were performed in the western half of the site, outside the limits of the former quarry excavation.

Each of the borings drilled in this area typically encountered a layer of topsoil or a layer of gravelly sand with cobbles up to 6 inches below ground surface. Below the surface materials, each boring initially encountered existing fill and potential fill soils to depths between 3 and 30 feet below the existing ground surface. The existing fill typically consisted of soft to very stiff

clay with varying amounts of sand and gravel or loose to medium dense sand with varying amounts of clay, silt, and gravel. The existing fill at Boring B-13 (1 to 12 feet) contained some materials believed to be quarry dust or another quarry by-product. We note that Borings B-5 (30 feet), B-6 (30 feet), and B-16 (15 feet) were terminated without penetrating the fill. Below the existing fill and possible fill materials, the remaining 12 borings encountered native soils to the planned boring termination depth. These native materials typically consisted of medium stiff to stiff clay or dense to very dense sand with varying amounts of silt and gravel. We note that some of the sands encountered are a weakly cemented or brittle sandstone that was able to be augered through with our onsite drill rig.

Laboratory Testing

We performed Atterberg limits and grain size testing on 11 test samples of the materials encountered west half of the site. The testing indicated that six of the samples were silty sand, two samples were clayey sand, one sample was silty/clayey sand, one sample was sandy silt, and one sample was sandy clay. Natural moisture contents for 14 test samples ranged from about 9 to 19% (average of about 13%), with the exception of one sample from B-13, which had a natural moisture of 106%. The outlier moisture content was performed on the apparent quarry by-product materials.

Strength testing performed on two relatively undisturbed samples of the clay soils from Borings B-7 and B-11 yielded unconfined compressive strengths of 457 and 1,433 psf.

We also collected a bulk sample of the upper 10 feet of auger cuttings at Boring B-6 for standard Proctor testing. The bulk sample of auger cuttings was composed of silty sand. The optimum moisture content of the sample was 13.7% with a maximum dry density of 115.6 pounds per cubic foot (pcf). We measured the electrical resistivity of the bulk sample in the laboratory to be 2,800 ohm-centimeters and the pH to be 8.64.

5.3 Groundwater

Thirty (30) of the 31 borings were dry at the time of drilling. However, Boring B-28 encountered groundwater at a depth of 6 feet during drilling. This boring was performed near the existing detention pond at the northeast corner of the site. The temporary detention pond was partially filled with water during our exploration, which likely influenced surrounding groundwater levels. We note that the borings were not developed to enhance flow into the augers. In addition, groundwater levels fluctuate seasonally and after periods of drought or excess precipitation. Therefore, groundwater levels may be different at other times. It is possible that perched water could accumulate and be encountered near the ground surface during periods of wet weather.

6.0 GEOLOGIC HAZARDS

6.1 Undocumented Fill

Fill soils are those that have been placed or reworked in conjunction with past construction, grading, or farming. Fill can be composed of different soil types from various sources and can contain debris from building demolition, organics, topsoil, trash, etc. The engineering properties of the fill depend on primarily on its composition, density, and moisture content. There is an inherent risk of construction and fill placement over areas of existing undocumented fill that may impact construction scheduling and costs. Existing fill will be encountered during site preparation and new fill placement as the existing slopes will be benched to accommodate new fill

6.2 Seismic Hazard

No significant faults or other geologic anomalies are noted on available geologic mapping within close proximity to the site. The 2013, Preliminary Bedrock Geology of Dane County, Wisconsin map shows faults approximately 2 and 5 files to the south of the project site. We believe that there are not active faults within the Dane County, Wisconsin area.

7.0 GEOTECHNICAL COMMENTS AND RECOMMENDATIONS

7.1 Geotechnical Assessment

Based upon the exploration data, our site reconnaissance, and our experience, we expect that the proposed marketplace project can be constructed at the site. However, we encountered existing fill materials in each of our 31 borings and believe that these existing fill materials will likely affect development costs at the site.

7.1.1 Fuel Center and Pavement Areas

The proposed fuel center and the majority of the pavement areas are located within the footprint of the former quarry excavation. The existing fill within the former quarry excavation was placed between 2014 and 2017 and intermittently tested by CGC. The CGC field reports indicate that the fill within the former quarry was generally placed and compacted to the specified criteria in approximate 6- to 12-inch lifts. However, the existing fill at the south end of the former quarry, above elevation 1,035 feet, was not tested during placement. CGC later performed in-place density testing on these materials by excavating test pits after completing fill placement. The density testing provided low compaction percentages. The field testing performed during our exploration are consistent with CGC's field density test results.

We understand that portions of south quarry footprint were surcharged for an unknown period of time after completing the quarry backfill. After removing the surcharge load (i.e., stockpile), CGC monitored the ground surface for settlement over a period of about six months (December 2017 through May 2018). During our exploration, we subcontracted with KL Engineering to

perform an additional round of surveying of the settlement monuments. The monitoring indicated up to ⅜-inch of settlement during the entire monitoring period, and the settlement generally tapered off after the first four months.

The pavement areas outside of the former quarry footprint are underlain by undocumented fill that was likely placed between 1976 and 2005. These materials are highly variable in consistency and include some very soft zones.

Based on our evaluation, we believe the existing fill materials within the north end of the former quarry were placed and compacted in a manner consistent with standard practices for engineered fill. Therefore, we believe these materials are acceptable for supporting the planned pavements in this area. However, there are some risks associated with using the undocumented fill at the south end of the former quarry to support the planned fuel center and pavements. These risks include foundation cracking, displacement, and settlement; cracking and poor fit of door and window frames; cracking of interior and exterior finishes; and cracking/settlement of pavements and the kiosk floor slab. Based on the settlement monitoring results and the light loads associated with the fuel center, we believe the risks associated with the undocumented fill within this area of the site are generally low. To further reduce these risks, we recommend that the geotechnical engineer or his representative have the opportunity to observe the bearing surface prior to concrete placement and document that conditions are as anticipated.

Additionally, the pavement and floor slab support materials should be thoroughly proofrolled prior to new fill placement or pavement/slab construction. Any soft or weak zones identified during the proofrolling should be repaired as recommended by the geotechnical engineer. The geotechnical engineer or his representative should observe the pavement and floor slab subgrades prior to crushed stone placement to check for evidence of excessively wet or dry soils. Undercutting of the soils or moisture re-conditioning and compaction may be required if these conditions are found. If the owner is not willing to accept the risks associated with supporting pavements and the fuel center on undocumented fill, we recommend completely undercutting the existing undocumented fill to an elevation of 1,035 feet and backfilling with new compacted fill.

We note that our comments and recommendations above assume that minimal grading (i.e., less than 2 feet of fill) occurs within the east half of the site. If fill thicknesses greater than this are planned, then we should be given the opportunity to revise our recommendations because additional settlement could occur due to the fill loading.

7.1.2 Marketplace Building

We were not provided any documentation for the existing fill within the western half of the site. We encountered undocumented fill to depths between about 3 and 30 feet within and near the planned marketplace building footprint. The undocumented fill materials typically consisted of moist, clay with rock fragments and was highly variable in consistency, with some very soft zones. We anticipate that some of the undocumented fill within the building footprint will be

removed during mass grading, but we expect that up to 25 feet of undocumented fill may still be located below the final subgrade level in the area of Boring B-8, depending on the finished floor elevation of the building.

We do not believe the undocumented fill materials within the western half of the site are satisfactory for support of the planned marketplace foundations and floor slab. Because of the random and highly variable consistencies within these materials, we believe there is a high risk of poor foundation performance resulting in excessive total and differential settlements. To address the geotechnical concerns associated with the undocumented fill, we recommend using one of the two ground improvement options below at the site to permit the use of spread foundations.

Option 1 – Completely remove the undocumented fill within the footprint of the planned marketplace building plus 5 feet beyond the building footprint. The undercut excavation may be backfilled with engineered fill as discussed later in this report. This undercut and replacement option will allow for the use of shallow, spread foundation bearing on new engineered fill.

Option 2 - Install a system of rammed, aggregate piers. Aggregate piers are columns of compacted stone that are installed in groups to increase bearing resistance and reduce settlement. The aggregate piers should be constructed beneath the planned column and wall foundations and floor slabs.

Additionally, there is a risk of poor pavement performance if the undocumented fill is used to support the planned pavements because of the potential for undetected weak zones and zones of deleterious materials. Undercutting and replacing the existing fill soils would reduce the risks associated with these materials. However, undercutting would likely significantly increase construction costs. Alternatively, the existing fill may be left in-place, provided the subgrade is prepared as recommended in this report and the owner is willing to accept some risk of localized depressions, cracking, and joint faulting. We cannot estimate the risk level based on the limited available data. To further reduce these risks, we recommend that the pavement support materials be thoroughly proofrolled prior to new fill placement or pavement construction. Any soft or weak zones identified during proofrolling activities should be repaired as recommended by the geotechnical engineer. The geotechnical engineer or his representative should observe the pavement subgrades prior to base stone placement to check for evidence of excessively wet or dry soils. Undercutting of the soils or moisture re-conditioning and compaction may be required if these conditions are found. We anticipate that significant remedial repairs may still be required based on the variable and sometimes low strength soils encountered in our borings. We note that the recommendations that are provided in this report assume that the owner is willing to accept the risks associated with the existing fill and will not elect to completely undercut these materials.

7.2 Site Preparation

Initially, all vegetation, topsoil, and frozen soil (if encountered) should be stripped from the construction footprint. Stripping operations should extend, where possible, a minimum of 10 feet beyond the limits of the proposed building and at least 5 feet beyond the limits of the proposed pavement. Removal of trees should occur as far in advance of general grading as possible in order to allow the soils' moisture content to return to normal levels. Removal of organics should include complete removal of tree root balls. Stripped material may be stockpiled onsite and reused for landscaping purposes or wasted off-site as appropriate (deleterious materials should be wasted off-site).

Based on our site observations and the ALTA survey, we do not anticipate existing utilities within the proposed building footprint. However, if detected during construction, special precautions should be made to remove all underground utilities and their associated backfill within and near the proposed building footprints. The resulting trenches should be backfilled with engineered fill as described below.

After stripping operations are complete, we recommend scarifying, moisture conditioning, and recompacting the upper 12 to 18 inches of subgrade soils in fill areas. After recompaction in fill areas and reaching the final subgrade level in cut areas, the contractor should proofroll the soil subgrade with heavy, rubber-tired equipment (such as a loaded dump truck with a minimum gross weight of 20 tons). The geotechnical engineer or his representative should observe the proofroll. The contractor should repair unstable soils revealed by the proofrolling operations to stable ground. After the subgrade has been stabilized, fill may be placed on the stable surface.

Because of the variable and sometimes soft consistency of the existing undocumented fills encountered during our exploration, we anticipate that some remedial subgrade repairs will be required. If the initial reworking of the subgrade did not improve stability enough, then undercutting of soft zones will likely be required. The undercut materials may be used as backfill, provided they meet the criteria in this report. However, moisture conditioning (i.e., wetting or drying) may be required to achieve suitable moisture conditions for proper recompaction. We note that in areas that require new fill thicknesses of three feet or greater, no undercutting may be required. In these areas, our geotechnical engineer should develop options for treatment other than additional undercutting based on actual site conditions and grading requirements. Alternative methods such as geogrid or geotextile reinforcement and bridging using engineered rock or soil fill may be used for subgrade stabilization in pavement areas where at least three feet of fill is planned.

In general, engineered soil fill should consist of cohesionless soil or low to medium plasticity clay (plasticity index less than 30) designated CL by the Unified Soil Classification System. Proposed fill should contain no debris, objectionable material, or rocks larger than 4 inches in maximum dimension. The geotechnical engineer should test and approve proposed borrow sources before use as engineered fill. Place engineered soil fill in lifts not exceeding 8 inches in loose thickness and compact to at least 98% of the standard Proctor (ASTM D 698) maximum

dry density. Control the moisture content of the engineered fill to within ± 2% of the standard Proctor optimum moisture content.

Our laboratory testing indicates that the on-site soils meet our recommended criteria for engineered soil type. However, our laboratory testing also indicates that the natural moisture contents of the upper on-site soils are generally wet of the optimum moisture content by up to 5 percent. Therefore, scarification and drying of the existing onsite soils may be necessary to achieve proper compaction. We note the moisture contents may be higher during cold and/or wet weather, which will make drying difficult. If grading occurs during a wet or cold season of the year, then lime stabilization or rock fill placement may be necessary to expedite site grading and achieve proper compaction.

Permanent outslopes of soil fill should be inclined no steeper than 2.5H:1V. An outslope inclination of 3H:1V or flatter should be incorporated if those areas are to be accessed with mowers or other landscaping equipment. Permanent cut slopes in stable soil may be laid back at inclinations no steeper than 2H:1V.

Vertical cuts in soil are usually unstable and present a significant hazard because they can fail without warning. Therefore, temporary construction slopes in soil up to 15 feet high should be inclined no-steeper-than 1.5 horizontal to 1.0 vertical (1.5H:1V), or braced, and material stockpiles, equipment, etc., should not be placed within 15 feet of the crest of any excavated slope. If the Contractor wishes to use temporary slopes for cuts deeper than 15 feet or for inclinations steeper than indicated herein, per OSHA regulations, they must be designed by an experienced, licensed professional engineer.

Temporary slopes may experience some minor localized instability (i.e., sloughing). To mitigate sloughing, all excavated slopes should be covered with polyethylene for protection from rainfall and moisture changes. Also, runoff should be diverted away from excavated slopes to prevent erosion and sloughing. Trench excavations and slope construction shall proceed with caution and stability of trenches and slopes during construction is the responsibility of the contractor. The contractor shall comply with all aspects of 29 CFR Part 1926, *OSHA Standards - Excavations; Final Rule* to protect workers.

We strongly recommend that site development be performed during seasonably dry weather and excavation/site preparation should not be performed during or immediately following periods of heavy precipitation. The site should be maintained in a well-drained condition, both during and after construction, to prevent water from ponding on soil subgrades. Ponding of water could lead to the deterioration of the subgrade, necessitating overexcavation of the softened soil. In addition, the amount of subgrade repair that may be required will vary based on weather conditions during the construction period. Undercut requirements could be substantial if construction traffic is allowed to traverse completed soil fills or other stripped areas during wet weather. In addition, repeated heavy loads from construction traffic upon otherwise stabilized soils have been known to compromise the integrity of the stabilized subgrades, necessitating reworking of the softened soils. Therefore, to the extent possible,

construction traffic on final subgrades should be prohibited. If construction traffic will be allowed on final subgrades, then we recommend stabilizing the surface by either chemical stabilization or aggregate base placement.

7.3 Foundation Design

7.3.1 Marketplace Building (Option 1) and Fuel Center

If the Owner elects to completely remove the undocumented fill within the footprint of the marketplace building and replace with new engineered fill, then this building may be supported by shallow spread foundations bearing on new engineered fill. We also recommend that the fuel center be supported by conventional, shallow spread foundations bearing on the existing fill soils or new engineered fill.

We assess the allowable bearing capacity of the recommended stratum for these structures to be 2,500 psf for loads as applied by column and continuous footings. This value is based on a safety factor of at least three against general shear failure. To accommodate minor inconsistencies within the subgrade, minimum footing widths of 18 and 24 inches should be specified for continuous and individual footings, respectively. Footings should be founded at least 48 inches below finished grades to provide adequate confinement and frost protection.

Lateral loads exerted against the spread foundation system can be resisted by the lateral earth pressure developed against the vertical face of the footing and by the friction acting between the base of the footing and the soil subgrade. Provided that the concrete for the footing is cast neat against the sides of an excavation, the lateral earth pressure can be computed based on an at-rest earth pressure coefficient of 0.53, an active earth pressure coefficient of 0.36, and a passive earth pressure coefficient of 2.8. A moist unit weight of 125 PCF may be used for the in-situ soils. The coefficient of friction between the base of the foundation and the soil subgrade is conservatively estimated at 0.35. A minimum code-specified factor of safety should be used when calculating sliding resistance to lateral loads.

To accommodate minor uplift loads, the designers may take into account the mass of the backfill above the footing element. The unit weight of the engineered backfill above the foundation (vertical projection of the footing limits) may be taken as 125 PCF. For random backfill placed thereon, the unit weight above the footing should be taken as 90 PCF.

Whenever possible, the contractor should open and cast concrete for foundation excavations on the same day. If excavations in soil must remain open for an extended period, they must be protected from rainfall, surface water infiltration, freezing and excessive drying. The geotechnical engineer or his representative should examine all footing excavations immediately prior to being cast with concrete to observe the bearing surface and to document that conditions are as anticipated. It is important that the geotechnical engineer or his representative have the opportunity to observe, test, and document the placement of engineered fill in the building footprint and all footing excavations.

It is possible that localized soft or very loose soils may be encountered at the planned foundation bearing level during construction. If encountered, these materials should be undercut and replaced with engineered soil fill or lean concrete.

When founded in accordance with our recommendations, we expect both total and differential settlements for the additions to be within limits normally considered tolerable for the structure discussed in this section. We estimate that the total post-construction foundation settlement will not exceed one inch and that differential settlement will not exceed 50% of the total increment.

7.3.2 Marketplace Building (Option 2)

In lieu of completely undercutting the undocumented fill within the footprint of the marketplace building, the site's subsurface conditions may be improved by installing a system of aggregate piers, such as rammed aggregate piers or vibro piers to achieve or exceed the minimum allowable bearing resistance listed in the previous section. Rammed aggregate pier construction consists of drilling a shaft to a desired depth then backfilling with compacted aggregate. The compaction densifies the aggregate vertically and forces aggregate into the shaft sidewalls. Vibro pier construction consist of using a vibratory probe to penetrate the subsurface soils to the desired depth, then aggregate fill is placed in the borehole. The aggregate is compacted by repeated raising and lowering of the vibratory probe. Each of the techniques above result in aggregate piers that may be used to support the planned mat foundation.

We note the aggregate systems are patented ground improvement methods that must be designed by the contractor's in-house designers. Therefore, the design spacing for the columns as well as installation procedures will be determined by the specialty contractor. We recommend reaching out to rammed aggregate pier installers such as Geopier Foundations, GeoRAM, Subsurface Constructors, Menard Group, and TerraSystems for more information on rammed aggregate piers. Hayward Baker and Malcolm Drilling can provide additional information for vibro piers.

7.4 Slabs-on-grade

The concrete slab-on-grade for the planned marketplace and fuel center kiosk are expected to perform satisfactorily if founded on a properly prepared subgrade as described above. A free-draining, granular base of at least 4 inches thick should be incorporated into the slab design. We recommend placing a vapor barrier beneath concrete slabs-on-grade that will be covered with carpet, wood, tile, or other moisture sensitive or impervious coverings, or when the slab will support equipment sensitive to moisture. A vapor barrier is not required in areas where the floor slab will consist of stamped/colored concrete without any floor covering. However, local building codes should be consulted regarding vapor barrier and insulation requirements. Slab thickness and reinforcing requirements can be designed based on an estimated subgrade reaction modulus of 150 pci for soil subgrades. An appropriate number of control joints should

be included in the slab design to accommodate minor differential settlement that may occur due to variation in subgrade support characteristics.

7.5 Groundwater Control

We encountered groundwater in Boring B-28 during drilling at a depth of about 6 feet. The remaining 30 borings were dry upon boring completion. In general, we expect that the permanent water table should not significantly impact construction at the site, provided the work is performed during dry seasons. However, it is possible that perched groundwater may be encountered closer to the ground surface. In general, we expect that groundwater flow into shallow construction excavations from on-site soils can typically be removed by pumping from a sump placed near the point of seepage. We note that the UST should be designed to resist hydrostatic uplift forces.

7.6 Seismic Design

The subject area is located within a relatively stable seismographic area that it is remotely influenced by the seismic activity associated with the New Madrid seismic zone. The subject site is located at approximately Latitude 43.017081°N, Longitude 89.482943°W. We determined spectral acceleration map values of Ss = 0.085g and S1 = 0.046g for the short (0.2 seconds) and 1-second periods (T), respectively, for this site.

In accordance with the *2015 International Building Code* (IBC), we estimated the soil properties from our borings and published geologic information to a depth of 100 feet. Based upon the subsurface conditions observed and our experience with similar sites and conditions, we judge that the site meets the minimum requirements for ***Site Class D***.

7.7 Pavement Design

If the proposed pavement areas are prepared in the manner described previously, we estimate that the soil subgrade will develop minimum support characteristics at least equal to a California Bearing Ratio (CBR) of 4.5. Based on that degree of subgrade support and the assumed traffic loadings as discussed in Section 2.0 of this report, we offer the following flexible pavement sections for your consideration. All elements of the pavement construction should conform to the latest requirements of the Wisconsin Department of Transportation's *Standard Specifications*.

Table 2 – Recommended Asphalt Pavement Sections

Material	Light Duty Pavement (cars only)	Heavy Duty Pavement
Asphalt Surface Course	1.5 inches	2.0 inches
Asphalt Binder Course	2.0 inches	2.0 inches
Mineral Aggregate Base Course compacted to at least 98% of its maximum modified Proctor (ASTM D 1557) dry density	8.0 inches	10.0 inches
Total Compacted Thickness	**11.5 inches**	**14.0 inches**

Immediately prior to the installation of the mineral aggregate base course, the pavement subgrade should be proofrolled to detect unstable areas; any unstable areas should be repaired as previously described. We recommend that subgrades be graded to provide positive drainage away from the paved areas to prevent the aggregate base course from being saturated and thereby reducing the support capabilities of the subgrade. In addition, we recommend that the base course be daylighted at the edges of the pavement, if possible.

During construction of the aggregate base, in-place density tests and thickness checks should be performed to evaluate compliance with project specifications. If a significant delay occurs between installation of the aggregate base and the bituminous elements above, the mineral aggregate should be proofrolled to confirm that no loss of stability has occurred. Ultimately, it is essential that the bituminous pavement elements are placed on a uniformly stable aggregate base. In addition, landscaped areas should be constructed with suitable underdrain systems so that surface water infiltration is not permitted to migrate laterally to the base stone or subgrade beneath the adjoining pavements.

Rigid pavement sections should consist of 5-inch thick concrete pavement for light duty sections and 7-inch thick concrete pavement for heavy duty sections. The concrete pavement for light and heavy duty should be underlain by a minimum of 6 inches of compacted mineral aggregate base. That section is based on an assumed modulus of rupture (S_c) of 600 psi for concrete that contains 4% to 6% entrained air. In addition, the rigid design is based on a modulus of subgrade reaction, k, conservatively estimated to be at least 150 pci.

7.8 Corrosion

We tested two bulk samples for electrical resistivity and pH. The bulk samples had soil resistivity values of 1,580 and 2,800 Ohm-cm with respective pH values of 9.19 and 8.64. Table 3 provides

a rating of soil corrosivity of uncoated steel based upon resistivity[1]. Based on this table, we consider the soil at the site to be highly corrosive to buried metal.

Table 3 - Corrosivity Rating for Uncoated Steel

Soil Resistivity (Ohm-cm)	Corrosivity Rating
0 - 1000	Extremely Corrosive
1000 - 3000	Highly Corrosive
3000 - 5000	Corrosive
5000 - 10000	Moderately Corrosive
10000 - 20000	Mildly Corrosive
> 20000	non-Corrosive

The pH testing results indicate that the corrosion potential for concrete is "low" based on the Natural Resources Conservation Service NSSH Part 618, Subpart B, Table 618.81.

8.0 REPORT LIMITATIONS

The conclusions and preliminary recommendations given in this report are based on information that we determined at the points of exploration. Our subsurface information and conclusions herein in no way reflect on the environmental aspects of the project. Subsurface and groundwater conditions between and beyond the borings may differ from those encountered at the locations explored, and conditions that we could not detect or anticipate at the time of the exploration and study, may become apparent during construction. We should be retained during the final design stage and during construction to verify that the design is consistent with our recommendations, and that assumptions that we made in our study are valid.

The comments that we present herein relating to potential construction problems and possible methods or sequencing of construction are intended only for the guidance of the designer. The number of borings may not be sufficient to determine all the factors that may affect construction methods and costs. For example, the thickness of overburden or fill may vary markedly and unpredictably. Contractors should make their own interpretation of the factual information presented, and draw their own conclusions as to how the subsurface conditions may affect the work. We undertook this study in accordance with normally accepted geotechnical engineering practices. Wood neither expresses nor implies any other warranty.

9.0 CLOSURE

We prepared this report for the exclusive use of The Kroger Company, for the site and criteria stated herein. Your questions or interpretation regarding any portion of the report should be addressed directly by us. Reliance upon, usage, or implementation of the information or recommendations stated in this report by any member of the project team should not be

[1] NACE International; *National Association of Corrosion Engineers*

undertaken without direct consultation of the client and Wood. Wood accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report. We advise the Owner to read the GBA document included in this report.

wood.

APPENDIX 1

GBA BROCHURE

Important Information about This

Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, clients can benefit from a lowered exposure to the subsurface problems that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed below, contact your GBA-member geotechnical engineer. Active involvement in the Geoprofessional Business Association exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.

Geotechnical-Engineering Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical-engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client. *Those who rely on a geotechnical-engineering report prepared for a different client can be seriously misled.* No one except authorized client representatives should rely on this geotechnical-engineering report without first conferring with the geotechnical engineer who prepared it. *And no one – not even you – should apply this report for any purpose or project except the one originally contemplated.*

Read this Report in Full

Costly problems have occurred because those relying on a geotechnical-engineering report did not read it *in its entirety*. Do not rely on an executive summary. Do not read selected elements only. *Read this report in full.*

You Need to Inform Your Geotechnical Engineer about Change

Your geotechnical engineer considered unique, project-specific factors when designing the study behind this report and developing the confirmation-dependent recommendations the report conveys. A few typical factors include:

- the client's goals, objectives, budget, schedule, and risk-management preferences;
- the general nature of the structure involved, its size, configuration, and performance criteria;
- the structure's location and orientation on the site; and
- other planned or existing site improvements, such as retaining walls, access roads, parking lots, and underground utilities.

Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light-industrial plant to a refrigerated warehouse;
- the elevation, configuration, location, orientation, or weight of the proposed structure;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes – even minor ones – and request an assessment of their impact. *The geotechnical engineer who prepared this report cannot accept responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.*

This Report May Not Be Reliable

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client;
- for a different project;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, that it could be unwise to rely on a geotechnical-engineering report whose reliability may have been affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If your geotechnical engineer has not indicated an "apply-by" date on the report, ask what it should be*, and, in general, *if you are the least bit uncertain* about the continued reliability of this report, contact your geotechnical engineer before applying it. A minor amount of additional testing or analysis – if any is required at all – could prevent major problems.

Most of the "Findings" Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site's subsurface through various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing were performed.* The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgment to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team from project start to project finish, so the individual can provide informed guidance quickly, whenever needed.

This Report's Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, *they are not final*, because the geotechnical engineer who developed them relied heavily on judgment and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* revealed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

This Report Could Be Misinterpreted

Other design professionals' misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a full-time member of the design team, to:

- confer with other design-team members,
- help develop specifications,
- review pertinent elements of other design professionals' plans and specifications, and
- be on hand quickly whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction observation.

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note conspicuously that you've included the material for informational purposes only.* To avoid misunderstanding, you may also want to note that "informational purposes" means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report, but they may rely on the factual data relative to the specific times, locations, and depths/elevations referenced. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a "phase-one" or "phase-two" environmental site assessment – differ significantly from those used to perform a geotechnical-engineering study. For that reason, a geotechnical-engineering report does not usually relate any environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated subsurface environmental problems have led to project failures.* If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk-management guidance. As a general rule, *do not rely on an environmental report prepared for a different client, site, or project, or that is more than six months old.*

Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, none of the engineer's services were designed, conducted, or intended to prevent uncontrolled migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, ***proper implementation of the geotechnical engineer's recommendations will not of itself be sufficient to prevent moisture infiltration.*** Confront the risk of moisture infiltration by including building-envelope or mold specialists on the design team. ***Geotechnical engineers are not building-envelope or mold specialists.***

GEOPROFESSIONAL BUSINESS ASSOCIATION

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wood.

APPENDIX 2

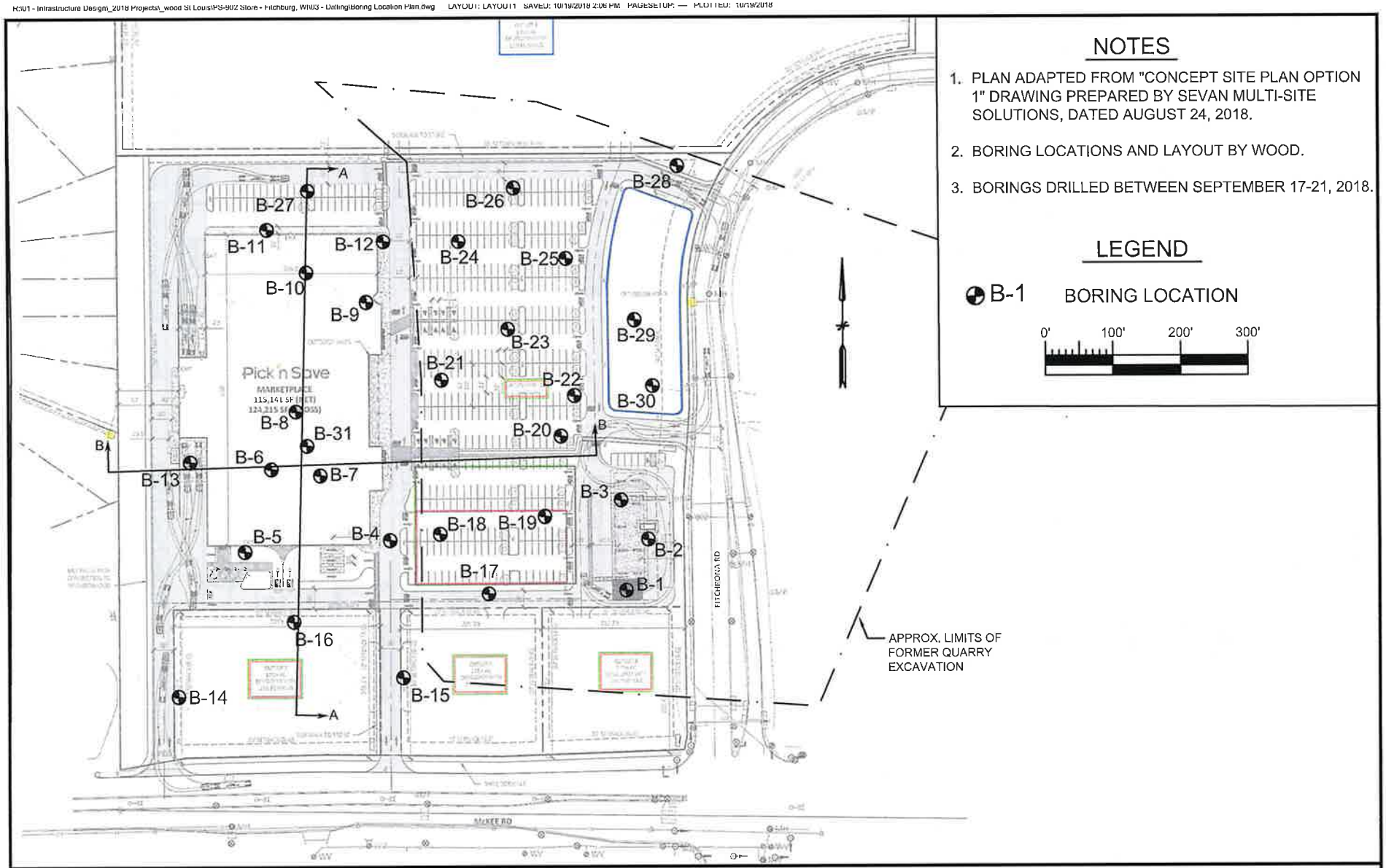
BORING LOCATION PLAN

KEY TO SYMBOLS AND DESCRIPTIONS

BORING LOGS

CROSS SECTIONS

R:\01 - Infrastructure Design_2018 Projects_wood St Louis\PS-902 Store - Fitchburg, WI\03 - Drilling\Boring Location Plan.dwg LAYOUT: LAYOUT1 SAVED: 10/19/2018 2:06 PM PAGESETUP: — PLOTTED: 10/19/2018



CLIENT: KROGER COMPANY	DRAWN BY: NCL	PROJECT: PROPOSED PICK ' N SAVE STORE (PS-902)	DATE: 10/19/2018
wood. 3800 Ezell Road, Suite 100 Nashville, Tennessee 37211 Phone: 615-333-0630	CHECKED BY: NAB	TITLE: BORING LOCATION PLAN	PROJECT NO: 2424-18-135
	SCALE: AS SHOWN		SHEET No. 1

KEY TO SYMBOLS AND DESCRIPTIONS

wood.

LITHOLOGIC SYMBOLS

- Asphalt
- Topsoil
- Concrete
- Fill (made ground)
- Boulders and cobbles
- High Plasticity Clay
- Low Plasticity Clay
- Low Plasticity Silty Clay
- Low Plasticity Sandy Clay
- Clayey Gravel
- Silty Gravel
- Poorly-graded Gravel
- Poorly-graded Gravel with Clay
- Poorly-graded Gravel with Silt
- Poorly-graded Sandy Gravel
- Well-graded Gravel
- Well-graded Gravel with Clay
- Well-graded Gravel with Silt
- Well-graded Sandy Gravel
- Elastic Silt
- Silt
- Gravelly Silt
- Sandy Silt
- Clayey Sand
- Clayey, Silty Sand
- Silty Sand
- Poorly-graded Sand
- Poorly-graded Gravelly Sand
- Poorly-graded Sand with Clay
- Poorly-graded Sand with Silt
- Well-graded Sand
- Well-graded Gravelly Sand
- Well-graded Sand with Clay
- Well-graded Sand with Silt
- Weathered Bedrock/Soil
- Limestone
- Sandstone
- Shale
- Siltstone
- Conglomerate
- Dolomite

SAMPLER SYMBOLS

- Rock Core
- Split Spoon
- Shelby Tube

CORRELATION OF STANDARD PENETRATION RESISTANCE WITH RELATIVE DENSITY AND CONSISTENCY

COHESIONLESS SOILS

Relative Density	SPT N-Value
Very Loose	4 or less
Loose	5 - 10
Medium Dense	11 - 30
Dense	31 - 50
Very Dense	Greater than 50

COHESIVE SOILS

Consistency	SPT N-Value
Very Soft	2 or less
Soft	3 - 4
Firm	5 - 8
Stiff	9 - 15
Very Stiff	16 - 30
Hard	31 - 50
Very Hard	Greater than 50

ABBREVIATIONS

LL – LIQUID LIMIT (%)
PI – PLASTIC INDEX (%)
W – MOISTURE CONTENT (%)
DD – DRY DENSITY (PCF)
NP – NON PLASTIC
-200 – PERCENT PASSING NO. 200 SIEVE
PP – POCKET PENETROMETER (TSF)
GB – GRAB SAMPLE

PID – PHOTOIONIZATION DETECTOR
UC – UNCONFINED COMPRESSION
ppm – PARTS PER MILLION
▼ Water Level at End of Drilling, or as Shown
▽ Water Level After 24 Hours, or as Shown

Wood
3800 Ezell Road, Suite 100
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Telephone: (615) 333-0630

BORING B-1

PROJECT NAME Pick N Save 902
PROJECT NUMBER 242418135
DATE STARTED 9/17/18 **COMPLETED** 9/17/18
DRILLING CONTRACTOR TSC
DRILLING METHOD HSA
DRILLING EQUIPMENT Morooka LTX800
HAMMER TYPE Automatic
LOGGED BY Nathan Brown **CHECKED BY** Nathan Long
NOTES

CLIENT Kroger Company
PROJECT LOCATION Fitchburg, WI
GROUND ELEVATION 1061 ft **HOLE SIZE** 6"
DRILLING TERMINATION DEPTH 35 ft / Elev 1026 ft
REFUSAL DEPTH N/A
GROUND WATER LEVELS:
AT END OF DRILLING Dry
24hrs AFTER DRILLING Not measured (backfilled at completion)

ELEV. (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ (10 20 30 40)	MOISTURE CONTENT (%)	ATT. LIMITS: LIQUID LIMIT	ATT. LIMITS: PLASTICITY INDEX
1061	0		6" GRAVELLY SAND with cobbles							
			CLAY, grayish brown, moist, medium stiff, with sand, trace gravel, (Fill)	SS 1		6-4-2 (6)		17	34	20
1056	5		SANDY CLAY, grayish brown to gray, moist, medium stiff to stiff, trace gravel, (Fill)	SS 2		4-31-6 (37)				
				SS 3		3-5-5 (10)				
1051	10			SS 4		3-2-4 (6)				
1046	15			SS 5		2-3-3 (6)				
			CLAYEY SAND, gray, moist, loose, trace gravel, (Fill)							
1041	20			SS 6		3-5-5 (10)				
			SANDY CLAY, grayish brown, moist, stiff, (Fill)							
1036	25			SS 7		3-5-10 (15)				
			SANDY CLAY, grayish brown, moist, very stiff, with gravel, (Fill)							
1031	30			SS 8		4-8-12 (20)				
1026	35		SAND, tannish gray, moist, very dense, with, (Residuum), with sandstone fragments	SS 9		4-32-50/2"	>>▲			
			Bottom of borehole at 35.0 feet.							

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BORING B-2

PROJECT NAME Pick N Save 902
PROJECT NUMBER 242418135
DATE STARTED 9/17/18 **COMPLETED** 9/17/18
DRILLING CONTRACTOR TSC
DRILLING METHOD HSA
DRILLING EQUIPMENT Morooka LTX800
HAMMER TYPE Automatic
LOGGED BY Nathan Brown **CHECKED BY** Nathan Long
NOTES

CLIENT Kroger Company
PROJECT LOCATION Fitchburg, WI
GROUND ELEVATION 1061 ft **HOLE SIZE** 6"
DRILLING TERMINATION DEPTH 30.1 ft / Elev 1030.9 ft
REFUSAL DEPTH N/A
GROUND WATER LEVELS:
AT END OF DRILLING Dry
24hrs AFTER DRILLING Not measured (backfilled at completion)

ELEV. (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ (10 20 30 40)	MOISTURE CONTENT (%)	ATT. LIMITS: LIQUID LIMIT	ATT. LIMITS: PLASTICITY INDEX
1061	0		6" GRAVELLY SAND with cobbles SILTY SAND, brown, moist, medium dense, with gravel, (Fill)	SS 1		5-5-6 (11)				
1056	5		SANDY GRAVEL, brown, moist, loose, (Fill), clayey	SS 2		4-3-4 (7)				
			SANDY CLAY, grayish brown, moist, medium stiff, trace gravel, (Fill)	SS 3		2-3-3 (6)				
1051	10			SS 4		3-2-3 (5)				
			CLAYEY SAND, grayish brown, moist, loose, trace gravel, (Fill)							
1046	15			SS 5		3-3-4 (7)				
			SANDY CLAY, grayish brown, moist, stiff to medium stiff, trace gravel, (Fill)							
1041	20			SS 6		5-5-5 (10)				
1036	25			SS 7		3-3-4 (7)				
1031	30			SS 8		4-4-50/4"	>>			
			Bottom of borehole at 30.1 feet.	SS 9		50/1"	>>			

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BORING B-3

PROJECT NAME Pick N Save 902
PROJECT NUMBER 242418135
DATE STARTED 9/17/18 **COMPLETED** 9/17/18
DRILLING CONTRACTOR TSC
DRILLING METHOD HSA
DRILLING EQUIPMENT Morooka LTX800
HAMMER TYPE Automatic
LOGGED BY Nathan Brown **CHECKED BY** Nathan Long
NOTES

CLIENT Kroger Company
PROJECT LOCATION Fitchburg, WI
GROUND ELEVATION 1062 ft **HOLE SIZE** 6"
DRILLING TERMINATION DEPTH 50 ft / Elev 1012 ft
REFUSAL DEPTH N/A
GROUND WATER LEVELS:
AT END OF DRILLING Dry
24hrs AFTER DRILLING Not measured (backfilled at completion)

ELEV. (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ (10 20 30 40)	MOISTURE CONTENT (%)	ATT. LIMITS: LIQUID LIMIT	ATT. LIMITS: PLASTICITY INDEX
1062	0		6" GRAVELLY SAND with cobbles							
			SANDY CLAY, grayish brown, moist, stiff, with gravel, (Fill)	SS 1		3-4-5 (9)				
			CLAYEY SAND, gray, moist, loose, trace gravel, (Fill)	SS 2		2-2-3 (5)				
1057	5			SS 3		2-3-4 (7)				
			SANDY CLAY, gray, moist, medium stiff, trace gravel, (Fill)	SS 4		2-3-3 (6)				
1052	10									
			SANDY CLAY, gray, moist, medium stiff to stiff, with gravel, (Fill)	SS 5		2-2-3 (5)				
1047	15									
				SS 6		4-3-6 (9)				
1042	20									
				SS 7		3-3-6 (9)				
1037	25									
				SS 8		4-6-5 (11)				
1032	30									
			SAND, tan, moist, loose, with clay, (Fill)	SS 9		6-3-2 (5)				
1027	35									
			SAND, tan, damp, and sandstone fragments. Possible weak and/or weathered sandstone. (Bedrock)	SS 10		26-50/1"	>>			
1022	40									

(Continued Next Page)

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BORING B-3

PROJECT NAME Pick N Save 902 **CLIENT** Kroger Company

PROJECT NUMBER 242418135 **PROJECT LOCATION** Fitchburg, WI

ELEV. (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ 10 20 30 40	MOISTURE CONTENT (%)	ATT. LIMITS LIQUID LIMIT	ATT. LIMITS PLASTICITY INDEX
1022	40		SAND, tan, damp, and sandstone fragments. Possible weak and/or weathered sandstone. (Bedrock) *(continued)*							
1017	45			SS 11		50/1"	>>▲			
1012	50			SS 12		50/1"	>>▲			

Bottom of borehole at 50.0 feet.

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BORING B-4

PROJECT NAME Pick N Save 902
CLIENT Kroger Company
PROJECT NUMBER 242418135
PROJECT LOCATION Fitchburg, WI
DATE STARTED 9/18/18 **COMPLETED** 9/18/18
GROUND ELEVATION 1072 ft **HOLE SIZE** 4"
DRILLING CONTRACTOR TSC
DRILLING TERMINATION DEPTH 20 ft / Elev 1052 ft
DRILLING METHOD SFA
REFUSAL DEPTH N/A
DRILLING EQUIPMENT Morooka LTX800
GROUND WATER LEVELS:
HAMMER TYPE Automatic
AT END OF DRILLING Dry
LOGGED BY Nathan Brown **CHECKED BY** Nathan Long
24hrs AFTER DRILLING Not measured (backfilled at completion)
NOTES

ELEV. (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ (10 20 30 40)	MOISTURE CONTENT (%)	ATT. LIMITS: LIQUID LIMIT	ATT. LIMITS: PLASTICITY INDEX
1072	0		6" GRAVELLY SAND with cobbles							
			CLAYEY SAND, grayish brown, moist, medium stiff to stiff, trace gravel, (Fill)	SS 1		6-5-3 (8)				
1067	5			SS 2		4-8-8 (16)		11	22	9
				SS 3		6-6-4 (10)				
1062	10		CLAYEY SAND, orangeish brown, moist, medium dense to very dense, (Residuum), with sandstone fragments	SS 4		3-5-10 (15)				
				SS 5		8-20-50/1"	>>			
1057	15		SAND, tan, moist, very dense, and sandstone fragments. Possible weak and/or weathered sandstone. (Bedrock)							
				SS 6		50/1"	>>			
1052	20									

Bottom of borehole at 20.0 feet.

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BORING B-5

PROJECT NAME Pick N Save 902
PROJECT NUMBER 242418135
DATE STARTED 9/19/18 **COMPLETED** 9/19/18
DRILLING CONTRACTOR TSC
DRILLING METHOD SFA
DRILLING EQUIPMENT Morooka LTX800
HAMMER TYPE Automatic
LOGGED BY Nathan Brown **CHECKED BY** Nathan Long
NOTES

CLIENT Kroger Company
PROJECT LOCATION Fitchburg, WI
GROUND ELEVATION 1082 ft **HOLE SIZE** 4"
DRILLING TERMINATION DEPTH 30 ft / Elev 1052 ft
REFUSAL DEPTH N/A
GROUND WATER LEVELS:
AT END OF DRILLING Dry
24hrs AFTER DRILLING Not measured (backfilled at completion)

ELEV. (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ (10 20 30 40)	MOISTURE CONTENT (%)	ATT. LIMITS: LIQUID LIMIT	ATT. LIMITS: PLASTICITY INDEX
1082	0		Surface densely vegitated							
			SANDY CLAY, brown, moist, medium stiff, with gravel, (Fill)	SS 1		4-3-4 (7)				
1077	5			SS 2		3-2-4 (6)				
				SS 3		3-3-3 (6)				
1072	10			SS 4		5-3-2 (5)				
			SAND, tan, dry, very dense, and sandstone fragments. Possible fill	SS 5		50/3"	>>			
1067	15									
1062	20			SS 6		50/2"	>>			
1057	25			SS 7		50/1"	>>			
			SILTY SAND, tan, moist, medium dense, with sandstone fragments. Possible fill							
1052	30			SS 8		10-12-7 (19)				

Bottom of borehole at 30.0 feet.

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BORING B-6

PROJECT NAME Pick N Save 902
PROJECT NUMBER 242418135
DATE STARTED 9/19/18 **COMPLETED** 9/19/18
DRILLING CONTRACTOR TSC
DRILLING METHOD SFA
DRILLING EQUIPMENT Morooka LTX800
HAMMER TYPE Automatic
LOGGED BY Nathan Brown **CHECKED BY** Nathan Long
NOTES perched water at 18'

CLIENT Kroger Company
PROJECT LOCATION Fitchburg, WI
GROUND ELEVATION 1078 ft **HOLE SIZE** 4"
DRILLING TERMINATION DEPTH 30 ft / Elev 1048 ft
REFUSAL DEPTH N/A
GROUND WATER LEVELS:
AT END OF DRILLING Dry
24hrs AFTER DRILLING Not measured (backfilled at completion)

ELEV. (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ (10 20 30 40)	MOISTURE CONTENT (%)	ATT. LIMITS: LIQUID LIMIT	ATT. LIMITS: PLASTICITY INDEX
1078	0		Surface vegitated							
			SANDY CLAY, brown, moist, stiff to medium stiff, with gravel, (Fill), some sandstone fragments	SS 1		4-5-4 (9)				
1073	5			SS 2		11-4-4 (8)				
			SANDY CLAY, brown to gray, moist to wet, soft, with gravel, (Fill)	SS 3		0-2-1 (3)				
1068	10			SS 4		2-2-2 (4)				
1063	15			SS 5		3-2-2 (4)				
1058	20		SANDY GRAVEL, tan, wet, dense, (Fill)	SS 6		3-20-34 (54)	>>			
			SANDY CLAY, gray, moist, medium stiff, with gravel, (Fill)	SS 7		3-4-3 (7)				
1053	25									
			SAND, white and tan, moist, and sandstone fragments. Possible fill	SS 8		16-36-12 (48)				
1048	30									

Bottom of borehole at 30.0 feet.

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BORING B-7

PROJECT NAME Pick N Save 902
PROJECT NUMBER 242418135
DATE STARTED 9/19/18 **COMPLETED** 9/19/18
DRILLING CONTRACTOR TSC
DRILLING METHOD SFA
DRILLING EQUIPMENT Morooka LTX800
HAMMER TYPE Automatic
LOGGED BY Nathan Brown **CHECKED BY** Nathan Long
NOTES

CLIENT Kroger Company
PROJECT LOCATION Fitchburg, WI
GROUND ELEVATION 1079 ft **HOLE SIZE** 4"
DRILLING TERMINATION DEPTH 30 ft / Elev 1049 ft
REFUSAL DEPTH N/A
GROUND WATER LEVELS:
AT END OF DRILLING Dry
24hrs AFTER DRILLING Not measured (backfilled at completion)

ELEV. (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ (10 20 30 40)	MOISTURE CONTENT (%)	ATT. LIMITS: LIQUID LIMIT	ATT. LIMITS: PLASTICITY INDEX
1079	0		Surface vegitated							
			SANDY CLAY, brown, damp, stiff, trace gravel, (Fill)	SS 1		6-6-6 (12)		12		
1074	5		SANDY CLAY, brown, moist, medium stiff to stiff, with gravel, trace wood fragments, (Fill)	SS 2		3-3-5 (8)		14		
				SS 3		15-7-4 (11)				
1069	10		SILTY SAND, gray, moist, very loose to loose, trace gravel, (Fill)	SS 4		3-1-2 (3)		16		
1064	15			SS 5		5-4-3 (7)		15	NP	NP
			CLAYEY SAND, gray, moist, medium dense, trace gravel, (Fill)	ST 1				16	22	8
1059	20									
			SILTY SAND, white, moist, medium dense, (Fill), and rock fragments	SS 6		7-6-7 (13)				
1054	25									
			CLAY, brown, moist, stiff, with sand, (Till)	SS 7		4-4-6 (10)				
1049	30									

Bottom of borehole at 30.0 feet.

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BORING B-8

PROJECT NAME Pick N Save 902
CLIENT Kroger Company
PROJECT NUMBER 242418135
PROJECT LOCATION Fitchburg, WI
DATE STARTED 9/19/18 **COMPLETED** 9/19/18
GROUND ELEVATION 1076 ft **HOLE SIZE** 4"
DRILLING CONTRACTOR TSC
DRILLING TERMINATION DEPTH 30 ft / Elev 1046 ft
DRILLING METHOD SFA
REFUSAL DEPTH N/A
DRILLING EQUIPMENT Morooka LTX800
GROUND WATER LEVELS:
HAMMER TYPE Automatic
AT END OF DRILLING Dry
LOGGED BY Nathan Brown **CHECKED BY** Nathan Long
24hrs AFTER DRILLING Not measured (backfilled at completion)
NOTES

ELEV. (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ (10 20 30 40)	MOISTURE CONTENT (%)	ATT. LIMITS: LIQUID LIMIT	ATT. LIMITS: PLASTICITY INDEX
1076	0		Surface vegitated							
			SANDY CLAY, brown, moist, stiff, with gravel, trace wood fragments, (Fill)	SS 1		5-5-7 (12)				
1071	5			SS 2		2-4-3 (7)				
				ST 1						
1066	10			SS 3		1-2-2 (4)				
			CLAYEY SAND, brown, moist, very loose, with gravel, (Fill)							
1061	15			SS 4		3-1-2 (3)				
			SANDY CLAY, brown to gray, moist, medium stiff, trace gravel, (Fill)							
1056	20			SS 5		2-2-3 (5)		17	22	10
1051	25			SS 6		3-3-4 (7)				
			CLAY, brown, moist, stiff, trace roots, (Till)							
1046	30			SS 7		4-5-6 (11)				

Bottom of borehole at 30.0 feet.

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BORING B-9

PROJECT NAME Pick N Save 902
PROJECT NUMBER 242418135
DATE STARTED 9/18/18 **COMPLETED** 9/18/18
DRILLING CONTRACTOR TSC
DRILLING METHOD SFA
DRILLING EQUIPMENT Morooka LTX800
HAMMER TYPE Automatic
LOGGED BY Nathan Brown **CHECKED BY** Nathan Long
NOTES

CLIENT Kroger Company
PROJECT LOCATION Fitchburg, WI
GROUND ELEVATION 1072 ft **HOLE SIZE** 4"
DRILLING TERMINATION DEPTH 20 ft / Elev 1052 ft
REFUSAL DEPTH N/A
GROUND WATER LEVELS:
AT END OF DRILLING Dry
24hrs AFTER DRILLING Not measured (backfilled at completion)

ELEV. (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ (10 20 30 40)	MOISTURE CONTENT (%)	ATT. LIMITS: LIQUID LIMIT	ATT. LIMITS: PLASTICITY INDEX
1072	0		6" GRAVELLY SAND with cobbles							
			SILTY SAND, brown, moist, medium dense, with gravel, (Fill)	SS 1		8-10-10 (20)		9	NP	NP
			SANDY CLAY, brown, moist, medium stiff, (Fill)							
1067	5		SANDY GRAVEL, tannish yellow, damp, medium dense	SS 2		3-8-10 (18)				
				SS 3		5-8-11 (19)				
1062	10			SS 4		8-13-11 (24)				
			SAND, orangeish brown to white, moist, very dense, Possible weak and/or weathered sandstone. (Bedrock)	SS 5		50/4"	>>			
1057	15									
1052	20			SS 6		50/3"	>>			

Bottom of borehole at 20.0 feet.

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BORING B-10

PROJECT NAME Pick N Save 902
CLIENT Kroger Company
PROJECT NUMBER 242418135
PROJECT LOCATION Fitchburg, WI
DATE STARTED 9/20/18 **COMPLETED** 9/20/18
GROUND ELEVATION 1067 ft **HOLE SIZE** 4"
DRILLING CONTRACTOR TSC
DRILLING TERMINATION DEPTH 20 ft / Elev 1047 ft
DRILLING METHOD SFA
REFUSAL DEPTH N/A
DRILLING EQUIPMENT Morooka LTX800
GROUND WATER LEVELS:
HAMMER TYPE Automatic
AT END OF DRILLING Dry
LOGGED BY Nathan Brown **CHECKED BY** Nathan Long
24hrs AFTER DRILLING Not measured (backfilled at completion)
NOTES

ELEV. (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ (10 20 30 40)	MOISTURE CONTENT (%)	ATT. LIMITS: LIQUID LIMIT	ATT. LIMITS: PLASTICITY INDEX
1067	0		Surface vegitated							
			SANDY CLAY, brown, moist, stiff, with gravel, (Fill)	SS 1		1-3-7 (10)				
1062	5		SANDY SILT, brown, moist, very stiff, trace gravel, (Fill)	SS 2		5-10-8 (18)		11	NP	NP
			SANDY CLAY, brown, moist, stiff, trace gravel, (Fill)	SS 3		3-6-3 (9)				
1057	10		CLAYEY SAND, brown, moist, loose, trace gravel, trace wood fragments, (Fill)	SS 4		2-2-4 (6)				
1052	15		SILTY SAND, brown, moist, medium dense, trace gravel, (Residuum)	SS 5		8-8-9 (17)				
1047	20		SAND, yellow and white, Possible weak and/or weathered sandstone	SS 6		50/3"	>>▲			

Bottom of borehole at 20.0 feet.

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BORING B-11

PROJECT NAME Pick N Save 902
CLIENT Kroger Company
PROJECT NUMBER 242418135
PROJECT LOCATION Fitchburg, WI
DATE STARTED 9/20/18 **COMPLETED** 9/20/18
GROUND ELEVATION 1076 ft **HOLE SIZE** 4"
DRILLING CONTRACTOR TSC
DRILLING TERMINATION DEPTH 20 ft / Elev 1056 ft
DRILLING METHOD SFA
REFUSAL DEPTH N/A
DRILLING EQUIPMENT Morooka LTX800
GROUND WATER LEVELS:
HAMMER TYPE Automatic
AT END OF DRILLING Dry
LOGGED BY Nathan Brown **CHECKED BY** Nathan Long
24hrs AFTER DRILLING Not measured (backfilled at completion)
NOTES perched water at 8'. shelby tube pushed from 8-10 feet (offset 5' east).

ELEV. (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ (10 20 30 40)	MOISTURE CONTENT (%)	ATT. LIMITS: LIQUID LIMIT	ATT. LIMITS: PLASTICITY INDEX
1076	0		Surface vegitated							
			SANDY CLAY, grayish brown, moist, soft, with gravel, (Fill)	SS 1		2-1-2 (3)				
1071	5			SS 2		0-1-1 (2)				
			SILTY SAND, brown, moist to wet, medium dense to very loose, with gravel, (Fill)	SS 3		3-4-7 (11)		13	NP	NP
1066	10			SS 4		1-0-1 (1)				
			CLAYEY SAND, grayish brown, moist, medium dense, trace gravel, silty, probable till							
1061	15			SS 5		7-7-9 (16)		11	18	5
1056	20			SS 6		5-5-7 (12)				

Bottom of borehole at 20.0 feet.

GEOTECH BH COLUMNS - GEOTECH TEMPLATE.GDT - 10/19/18 14:11 - R:\01 - INFRASTRUCTURE DESIGN_2018 PROJECTS_WOOD ST LOUIS\PS-902 STORE - FITCHBURG, WI\03 - DRILLING\BORING LOGS.GPJ

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BORING B-12

PROJECT NAME Pick N Save 902
CLIENT Kroger Company
PROJECT NUMBER 242418135
PROJECT LOCATION Fitchburg, WI
DATE STARTED 9/18/18 **COMPLETED** 9/18/18
GROUND ELEVATION 1072 ft **HOLE SIZE** 4"
DRILLING CONTRACTOR TSC
DRILLING TERMINATION DEPTH 20 ft / Elev 1052 ft
DRILLING METHOD SFA
REFUSAL DEPTH N/A
DRILLING EQUIPMENT Morooka LTX800
GROUND WATER LEVELS:
HAMMER TYPE Automatic
AT END OF DRILLING Dry
LOGGED BY Nathan Brown **CHECKED BY** Nathan Long
24hrs AFTER DRILLING Not measured (backfilled at completion)
NOTES

ELEV. (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ (10 20 30 40)	MOISTURE CONTENT (%)	ATT. LIMITS: LIQUID LIMIT	ATT. LIMITS: PLASTICITY INDEX
1072	0		6" GRAVELLY SAND with cobbles							
			SILTY SAND, brown, moist, medium dense, trace gravel, (Fill)	SS 1		4-7-8 (15)				
			SILTY SAND, grayish brown, moist, medium dense, with gravel, Possible fill	SS 2		4-5-6 (11)				
1067	5			SS 3		5-6-12 (18)		10	NP	NP
				SS 4		8-16-50/2"	>>			
1062	10		SAND, orangeish brown to white, and sandstone fragments. Possible weak and/or weathered sandstone. (Bedrock)							
				SS 5		50/1"	>>			
1057	15									
				SS 6		50/1"	>>			
1052	20									

Bottom of borehole at 20.0 feet.

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BORING B-13

PROJECT NAME Pick N Save 902
PROJECT NUMBER 242418135
DATE STARTED 9/19/18 **COMPLETED** 9/19/18
DRILLING CONTRACTOR TSC
DRILLING METHOD SFA
DRILLING EQUIPMENT Morooka LTX800
HAMMER TYPE Automatic
LOGGED BY Nathan Brown **CHECKED BY** Nathan Long
NOTES

CLIENT Kroger Company
PROJECT LOCATION Fitchburg, WI
GROUND ELEVATION 1049 ft **HOLE SIZE** 4"
DRILLING TERMINATION DEPTH 20 ft / Elev 1029 ft
REFUSAL DEPTH N/A
GROUND WATER LEVELS:
AT END OF DRILLING Dry
24hrs AFTER DRILLING Not measured (backfilled at completion)

ELEV. (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ (10 20 30 40)	MOISTURE CONTENT (%)	ATT. LIMITS: LIQUID LIMIT	ATT. LIMITS: PLASTICITY INDEX
1049	0		Surface densely vegitated SILTY SAND, white, moist, loose, with rock fragments, (Fill), possible weathered/weak dolomite. Crumbles to powder	SS 1		2-4-3 (7)		107	NP	NP
1044	5		SILTY CLAY, white, moist, soft to very stiff, with rock fragments, (Fill), sandy, possible weathered/weak dolomite. Crumbles to powder	SS 2		1-1-5 (6)				
				SS 3		3-1-2 (3)				
1039	10			SS 4		15-6-11 (17)				
			CLAY, gray and brown, moist, stiff, (Till)							
1034	15			SS 5		4-3-6 (9)				
1029	20		SAND, white to reddish brown, dry, dense, with sandstone fragments. Possible weathered sandstone	SS 6		30-25-18 (43)				

Bottom of borehole at 20.0 feet.

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BORING B-14

PROJECT NAME Pick N Save 902
CLIENT Kroger Company
PROJECT NUMBER 242418135
PROJECT LOCATION Fitchburg, WI
DATE STARTED 9/19/18 **COMPLETED** 9/19/18
GROUND ELEVATION 1066 ft **HOLE SIZE** 4"
DRILLING CONTRACTOR TSC
DRILLING TERMINATION DEPTH 15 ft / Elev 1051 ft
DRILLING METHOD SFA
REFUSAL DEPTH N/A
DRILLING EQUIPMENT Morooka LTX800
GROUND WATER LEVELS:
HAMMER TYPE Automatic
AT END OF DRILLING Dry
LOGGED BY Nathan Brown **CHECKED BY** Nathan Long
24hrs AFTER DRILLING Not measured (backfilled at completion)
NOTES

ELEV. (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ (10 20 30 40)	MOISTURE CONTENT (%)	ATT. LIMITS: LIQUID LIMIT	ATT. LIMITS: PLASTICITY INDEX
1066	0		Surface densely vegitated							
			CLAY, brown, moist, medium stiff, with sand, (Fill)	SS 1		3-3-3 (6)				
1061	5		CLAYEY SAND, brown, moist, loose, trace gravel, (Fill)	SS 2		5-5-3 (8)				
			SAND, tannish white, moist, medium dense, (Fill), with sandstone fragments	SS 3		10-7-7 (14)				
1056	10		CLAY, dark brown, moist, medium stiff, (Topsoil)	SS 4		2-3-4 (7)				
			SILTY SAND, brown, moist, medium dense, (Residuum), trace sandstone fragments	SS 5		4-5-7 (12)				
1051	15									

Bottom of borehole at 15.0 feet.

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BORING B-15

PROJECT NAME Pick N Save 902
CLIENT Kroger Company
PROJECT NUMBER 242418135
PROJECT LOCATION Fitchburg, WI
DATE STARTED 9/19/18 **COMPLETED** 9/19/18
GROUND ELEVATION 1066 ft **HOLE SIZE** 4"
DRILLING CONTRACTOR TSC
DRILLING TERMINATION DEPTH 14.2 ft / Elev 1051.8 ft
DRILLING METHOD SFA
REFUSAL DEPTH N/A
DRILLING EQUIPMENT Morooka LTX800
GROUND WATER LEVELS:
HAMMER TYPE Automatic
AT END OF DRILLING Dry
LOGGED BY Nathan Brown **CHECKED BY** Nathan Long
24hrs AFTER DRILLING Not measured (backfilled at completion)
NOTES

ELEV. (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ (10 20 30 40)	MOISTURE CONTENT (%)	ATT. LIMITS: LIQUID LIMIT	ATT. LIMITS: PLASTICITY INDEX
1066	0		6" GRAVELLY SAND with cobbles							
			SILTY SAND, tannish brown, moist, medium dense, trace gravel, possible fill	SS 1		13-18-15 (33)				
				SS 2		28-16-22 (38)				
1061	5		SAND, tannish brown, moist, dense, with silt, trace gravel, (Residuum)	SS 3		5-21-50/1"	>>			
			SAND, tannish brown, moist, very dense, with silt, possible weak and/or weathered sandstone	SS 4		50/3"	>>			
1056	10			SS 5		50/2"	>>			

Bottom of borehole at 14.2 feet.

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BORING B-16

PROJECT NAME Pick N Save 902
CLIENT Kroger Company
PROJECT NUMBER 242418135
PROJECT LOCATION Fitchburg, WI
DATE STARTED 9/19/18 **COMPLETED** 9/19/18
GROUND ELEVATION 1079 ft **HOLE SIZE** 4"
DRILLING CONTRACTOR TSC
DRILLING TERMINATION DEPTH 15 ft / Elev 1064 ft
DRILLING METHOD SFA
REFUSAL DEPTH N/A
DRILLING EQUIPMENT Morooka LTX800
GROUND WATER LEVELS:
HAMMER TYPE Automatic
AT END OF DRILLING Dry
LOGGED BY Nathan Brown **CHECKED BY** Nathan Long
24hrs AFTER DRILLING Not measured (backfilled at completion)
NOTES

ELEV. (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ (10 20 30 40)	MOISTURE CONTENT (%)	ATT. LIMITS: LIQUID LIMIT	ATT. LIMITS: PLASTICITY INDEX
1079	0		Surface vegitated							
			SANDY CLAY, brown, moist, medium stiff, with gravel, (Fill)	SS 1		3-3-5 (8)				
1074	5		GRAVELLY CLAY, brown, soft to stiff, (Fill), with concrete fragments at 3.5'. Low recoveries due to high gravel content.	SS 2		34-7-3 (10)				
				SS 3		2-2-3 (5)				
1069	10			SS 4		4-4-6 (10)				
			SAND, tan, moist, dense, (Fill)							
1064	15			SS 5		15-9-43 (52)	>>			

Bottom of borehole at 15.0 feet.

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BORING B-17

PROJECT NAME Pick N Save 902
PROJECT NUMBER 242418135
DATE STARTED 9/19/18 **COMPLETED** 9/19/18
DRILLING CONTRACTOR TSC
DRILLING METHOD SFA
DRILLING EQUIPMENT Morooka LTX800
HAMMER TYPE Automatic
LOGGED BY Nathan Brown **CHECKED BY** Nathan Long
NOTES

CLIENT Kroger Company
PROJECT LOCATION Fitchburg, WI
GROUND ELEVATION 1066 ft **HOLE SIZE** 4"
DRILLING TERMINATION DEPTH 15 ft / Elev 1051 ft
REFUSAL DEPTH N/A
GROUND WATER LEVELS:
AT END OF DRILLING Dry
24hrs AFTER DRILLING Not measured (backfilled at completion)

ELEV. (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ 10 20 30 40	MOISTURE CONTENT (%)	ATT. LIMITS LIQUID LIMIT	ATT. LIMITS PLASTICITY INDEX
1066	0		6" GRAVELLY SAND with cobbles							
			SANDY CLAY, grayish brown, moist, soft, with gravel, (Fill)	SS 1		2-2-2 (4)				
1061	5			SS 2		5-3-3 (6)				
				SS 3		1-2-2 (4)				
1056	10		CLAYEY SAND, brown, moist, medium dense, trace gravel, (Fill)	SS 4		4-6-11 (17)				
			SILTY SAND, brown, moist, loose, with gravel, (Fill)							
1051	15			SS 5		2-2-2 (4)				

Bottom of borehole at 15.0 feet.

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BORING B-18

PROJECT NAME Pick N Save 902
CLIENT Kroger Company
PROJECT NUMBER 242418135
PROJECT LOCATION Fitchburg, WI
DATE STARTED 9/20/18 **COMPLETED** 9/20/18
GROUND ELEVATION 1069 ft **HOLE SIZE** 4"
DRILLING CONTRACTOR TSC
DRILLING TERMINATION DEPTH 15 ft / Elev 1054 ft
DRILLING METHOD SFA
REFUSAL DEPTH N/A
DRILLING EQUIPMENT Morooka LTX800
GROUND WATER LEVELS:
HAMMER TYPE Automatic
AT END OF DRILLING Dry
LOGGED BY Nathan Brown **CHECKED BY** Nathan Long
24hrs AFTER DRILLING Not measured (backfilled at completion)
NOTES

ELEV. (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ (10 20 30 40)	MOISTURE CONTENT (%)	ATT. LIMITS: LIQUID LIMIT	ATT. LIMITS: PLASTICITY INDEX
1069	0		6" GRAVELLY SAND with cobbles							
			SANDY CLAY, grayish brown, moist, medium stiff, with gravel, (Fill)	SS 1		3-2-3 (5)				
			GRAVELLY SAND, reddish brown, damp, loose, (Fill)	SS 2		5-5-4 (9)				
1064	5		SILTY SAND, reddish brown, moist, loose, with gravel, (Fill)	SS 3		3-3-2 (5)				
			(Fill), ROCK FRAGMENTS AND SAND, yellowish tan, dry, medium dense	SS 4		7-12-12 (24)				
1059	10		SAND, orangeish brown, moist, dense, possible residuum or weak bedrock	SS 5		9-18-50/5"	>>			
1054	15									

Bottom of borehole at 15.0 feet.

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BORING B-19

PROJECT NAME Pick N Save 902
PROJECT NUMBER 242418135
DATE STARTED 9/19/18 **COMPLETED** 9/19/18
DRILLING CONTRACTOR TSC
DRILLING METHOD SFA
DRILLING EQUIPMENT Morooka LTX800
HAMMER TYPE Automatic
LOGGED BY Nathan Brown **CHECKED BY** Nathan Long
NOTES

CLIENT Kroger Company
PROJECT LOCATION Fitchburg, WI
GROUND ELEVATION 1065 ft **HOLE SIZE** 4"
DRILLING TERMINATION DEPTH 15 ft / Elev 1050 ft
REFUSAL DEPTH N/A
GROUND WATER LEVELS:
AT END OF DRILLING Dry
24hrs AFTER DRILLING Not measured (backfilled at completion)

ELEV. (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ (10 20 30 40)	MOISTURE CONTENT (%)	ATT. LIMITS: LIQUID LIMIT	ATT. LIMITS: PLASTICITY INDEX
1065	0		6" GRAVELLY SAND with cobbles SILTY SAND, brown, moist, loose, with gravel, (Fill)	SS 1		4-4-4 (8)		9	NP	NP
1060	5		SANDY CLAY, grayish brown to brown, moist, stiff, with gravel, (Fill), large asphalt chunk at 8.5'	SS 2		4-4-6 (10)				
				SS 3		3-4-6 (10)				
1055	10			SS 4		65-50/3"	>>▲			
1050	15		SILTY SAND, grayish brown, moist, dense, with gravel, (Fill)	SS 5		6-24-8 (32)				

Bottom of borehole at 15.0 feet.

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BORING B-20

PROJECT NAME Pick N Save 902
PROJECT NUMBER 242418135
DATE STARTED 9/20/18 **COMPLETED** 9/20/18
DRILLING CONTRACTOR TSC
DRILLING METHOD HSA
DRILLING EQUIPMENT Morooka LTX800
HAMMER TYPE Automatic
LOGGED BY Nathan Brown **CHECKED BY** Nathan Long
NOTES

CLIENT Kroger Company
PROJECT LOCATION Fitchburg, WI
GROUND ELEVATION 1065 ft **HOLE SIZE** 6"
DRILLING TERMINATION DEPTH 50 ft / Elev 1015 ft
REFUSAL DEPTH N/A
GROUND WATER LEVELS:
AT END OF DRILLING Dry
24hrs AFTER DRILLING Not measured (backfilled at completion)

ELEV. (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ (10 20 30 40)	MOISTURE CONTENT (%)	ATT. LIMITS: LIQUID LIMIT	ATT. LIMITS: PLASTICITY INDEX
1065	0		6" GRAVELLY SAND with cobbles							
			SANDY CLAY, dark brown, moist, stiff, with gravel, (Fill)	SS 1		5-6-6 (12)				
1060	5			SS 2		3-3-8 (11)				
			SANDY CLAY, gray, moist, medium stiff, trace gravel, (Fill)	SS 3		3-3-4 (7)				
			CLAYEY SAND, gray, moist, with gravel, (Fill)	ST 1				10	27	11
1055	10									
			SANDY CLAY, gray to tan, moist, stiff, trace gravel, (Fill), asphalt chunks at 18.5'	SS 4		2-5-6 (11)				
1050	15									
				SS 5		7-4-6 (10)				
1045	20									
				SS 6		2-3-4 (7)				
1040	25									
			SANDY CLAY, grayish brown, moist, hard, with gravel, probable fill	SS 7		6-11-18 (29)				
1035	30									
			SILTY SAND, light brown to yellowish white, moist, very dense, (Residuum)	SS 8		50/5"	>>			
1030	35									
				SS 9		6-21-50 (71)	>>	8	NP	NP
1025	40									

(Continued Next Page)

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BORING B-20

PROJECT NAME Pick N Save 902 **CLIENT** Kroger Company

PROJECT NUMBER 242418135 **PROJECT LOCATION** Fitchburg, WI

ELEV. (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ 10 20 30 40	MOISTURE CONTENT (%)	ATT. LIMITS LIQUID LIMIT	ATT. LIMITS PLASTICITY INDEX
1025	40		SILTY SAND, light brown to yellowish white, moist, very dense, (Residuum) *(continued)*							
1020	45			SS 10		18-39-50/2"	>>▲			
1015	50			SS 11		50/1"	>>▲			

Bottom of borehole at 50.0 feet.

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BORING B-21

PROJECT NAME Pick N Save 902
CLIENT Kroger Company
PROJECT NUMBER 242418135
PROJECT LOCATION Fitchburg, WI
DATE STARTED 9/20/18 **COMPLETED** 9/20/18
GROUND ELEVATION 1068 ft **HOLE SIZE** 4"
DRILLING CONTRACTOR TSC
DRILLING TERMINATION DEPTH 15 ft / Elev 1053 ft
DRILLING METHOD SFA
REFUSAL DEPTH N/A
DRILLING EQUIPMENT Morooka LTX800
GROUND WATER LEVELS:
HAMMER TYPE Automatic
AT END OF DRILLING Dry
LOGGED BY Nathan Brown **CHECKED BY** Nathan Long
24hrs AFTER DRILLING Not measured (backfilled at completion)
NOTES Boring encountered refusal at 5' on first attempt and was offset 5' west

ELEV. (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ (10 20 30 40)	MOISTURE CONTENT (%)	ATT. LIMITS LIQUID LIMIT	ATT. LIMITS PLASTICITY INDEX
1068	0		6" GRAVELLY SAND with cobbles							
			SANDY CLAY, brown, moist, very stiff, with gravel, (Fill)	SS 1		7-10-11 (21)				
1063	5		SILTY SAND, brown, moist, medium dense, trace gravel, (Fill)	SS 2		6-11-16 (27)		9	NP	NP
			SANDY CLAY, grayish brown, moist, very stiff, with gravel, (Fill)	SS 3		6-9-13 (22)				
1058	10			SS 4		6-7-13 (20)				
			SILTY SAND, tannish brown, moist, very dense, with gravel, (Fill)	SS 5		21-49-50 (99)	>>			
1053	15									

Bottom of borehole at 15.0 feet.

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BORING B-22

PROJECT NAME Pick N Save 902
PROJECT NUMBER 242418135
DATE STARTED 9/20/18 **COMPLETED** 9/20/18
DRILLING CONTRACTOR TSC
DRILLING METHOD SFA
DRILLING EQUIPMENT Morooka LTX800
HAMMER TYPE Automatic
LOGGED BY Nathan Brown **CHECKED BY** Nathan Long
NOTES

CLIENT Kroger Company
PROJECT LOCATION Fitchburg, WI
GROUND ELEVATION 1064 ft **HOLE SIZE** 4"
DRILLING TERMINATION DEPTH 15 ft / Elev 1049 ft
REFUSAL DEPTH N/A
GROUND WATER LEVELS:
AT END OF DRILLING Dry
24hrs AFTER DRILLING Not measured (backfilled at completion)

ELEV. (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ (10 20 30 40)	MOISTURE CONTENT (%)	ATT. LIMITS: LIQUID LIMIT	ATT. LIMITS: PLASTICITY INDEX
1064	0		6" GRAVELLY SAND with cobbles							
			SANDY CLAY, grayish brown, moist, very stiff to medium stiff, with gravel, (Fill)	SS 1		5-7-10 (17)				
1059	5			SS 2		3-4-6 (10)				
				SS 3		6-8-10 (18)				
1054	10			SS 4		3-8-12 (20)				
1049	15			SS 5		2-2-3 (5)				

Bottom of borehole at 15.0 feet.

GEOTECH BH COLUMNS - GEOTECH TEMPLATE.GDT - 10/19/18 14:11 - R:\01 - INFRASTRUCTURE DESIGN_2018 PROJECTS_WOOD ST LOUIS\PS-902 STORE - FITCHBURG, WI\03 - DRILLING\BORING LOGS.GPJ

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BORING B-23

PROJECT NAME Pick N Save 902
PROJECT NUMBER 242418135
DATE STARTED 9/20/18 **COMPLETED** 9/20/18
DRILLING CONTRACTOR TSC
DRILLING METHOD SFA
DRILLING EQUIPMENT Morooka LTX800
HAMMER TYPE Automatic
LOGGED BY Nathan Brown **CHECKED BY** Nathan Long
NOTES

CLIENT Kroger Company
PROJECT LOCATION Fitchburg, WI
GROUND ELEVATION 1067 ft **HOLE SIZE** 4"
DRILLING TERMINATION DEPTH 15 ft / Elev 1052 ft
REFUSAL DEPTH N/A
GROUND WATER LEVELS:
AT END OF DRILLING Dry
24hrs AFTER DRILLING Not measured (backfilled at completion)

ELEV. (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ (10 20 30 40)	MOISTURE CONTENT (%)	ATT. LIMITS: LIQUID LIMIT	ATT. LIMITS: PLASTICITY INDEX
1067	0		6" GRAVELLY SAND with cobbles							
			SANDY CLAY, grayish brown, moist, very stiff, with gravel, (Fill)	SS 1		6-12-14 (26)				
1062	5		SILTY SAND, brown, moist, medium dense, with gravel, (Fill)	SS 2		5-17-9 (26)				
			SANDY CLAY, grayish brown, moist, medium stiff, with gravel, (Fill)	SS 3		4-3-3 (6)				
1057	10		SAND, brown, moist, dense, with gravel, (Fill)	SS 4		7-12-17 (29)				
			SILTY SAND, brown, moist, dense, with gravel, (Fill)							
1052	15			SS 5		9-17-20 (37)				

Bottom of borehole at 15.0 feet.

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Wood
3800 Ezell Road, Suite 100
Nashville, TN 37211
Telephone: (615) 333-0630

BORING B-24

PROJECT NAME Pick N Save 902
PROJECT NUMBER 242418135
DATE STARTED 9/18/18 **COMPLETED** 9/18/18
DRILLING CONTRACTOR TSC
DRILLING METHOD HSA
DRILLING EQUIPMENT Morooka LTX800
HAMMER TYPE Automatic
LOGGED BY Nathan Brown **CHECKED BY** Nathan Long
NOTES

CLIENT Kroger Company
PROJECT LOCATION Fitchburg, WI
GROUND ELEVATION 1070 ft **HOLE SIZE** 6"
DRILLING TERMINATION DEPTH 50 ft / Elev 1020 ft
REFUSAL DEPTH N/A
GROUND WATER LEVELS:
AT END OF DRILLING Dry
24hrs AFTER DRILLING Not measured (backfilled at completion)

ELEV. (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ (10 20 30 40)	MOISTURE CONTENT (%)	ATT. LIMITS: LIQUID LIMIT	ATT. LIMITS: PLASTICITY INDEX
1070	0		6" GRAVELLY SAND with cobbles							
			SANDY CLAY, brown, moist, very stiff, trace gravel, trace organics, (Fill)	SS 1		5-6-12 (18)				
1065	5		SILTY SAND, tannish brown, moist, medium dense, with gravel, (Fill)	SS 2		5-15-12 (27)				
				SS 3		7-13-14 (27)				
1060	10			SS 4		3-12-13 (25)				
			SANDY CLAY, grayish brown, moist, stiff, with gravel, (Fill)							
1055	15			SS 5		3-5-5 (10)				
1050	20			SS 6		8-7-7 (14)				
1045	25			SS 7		3-5-7 (12)				
			CLAYEY GRAVEL, brown, moist, medium dense, with sand, (Fill), silty							
1040	30			SS 8		3-6-16 (22)		13	19	5
			GRAVELLY CLAY, grayish brown, moist, stiff, trace grass, (Fill), sandy							
1035	35			SS 9		4-6-9 (15)				
			GRAVELLY SAND, brown, moist, medium dense, (Fill), with asphalt chuncks							
1030	40			SS 10		6-6-6 (12)				

(Continued Next Page)

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Nashville, TN 37211
Telephone: (615) 333-0630

BORING B-24

PROJECT NAME Pick N Save 902 **CLIENT** Kroger Company

PROJECT NUMBER 242418135 **PROJECT LOCATION** Fitchburg, WI

ELEV. (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ (10 20 30 40)	MOISTURE CONTENT (%)	ATT. LIMITS: LIQUID LIMIT	ATT. LIMITS: PLASTICITY INDEX
1030	40		GRAVELLY SAND, brown, moist, medium dense, (Fill), with asphalt chuncks *(continued)*							
			SANDY CLAY, grayish brown, moist, stiff, with gravel, (Fill)							
1025	45			SS 11		4-5-4 (9)				
			SAND, tan and white, moist, medium dense, with silt, (Residuum)							
1020	50			SS 12		5-8-8 (16)				

Bottom of borehole at 50.0 feet.

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Nashville, TN 37211
Telephone: (615) 333-0630

BORING B-25

PROJECT NAME Pick N Save 902
CLIENT Kroger Company
PROJECT NUMBER 242418135
PROJECT LOCATION Fitchburg, WI
DATE STARTED 9/20/18 **COMPLETED** 9/20/18
GROUND ELEVATION 1064 ft **HOLE SIZE** 4"
DRILLING CONTRACTOR TSC
DRILLING TERMINATION DEPTH 15 ft / Elev 1049 ft
DRILLING METHOD SFA
REFUSAL DEPTH N/A
DRILLING EQUIPMENT Morooka LTX800
GROUND WATER LEVELS:
HAMMER TYPE Automatic
AT END OF DRILLING Dry
LOGGED BY Nathan Brown **CHECKED BY** Nathan Long
24hrs AFTER DRILLING Not measured (backfilled at completion)
NOTES

ELEV. (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ (10 20 30 40)	MOISTURE CONTENT (%)	ATT. LIMITS: LIQUID LIMIT	ATT. LIMITS: PLASTICITY INDEX
1064	0		6" GRAVELLY SAND with cobbles SANDY CLAY, brown, moist, stiff, trace gravel, (Fill)	SS 1		4-4-11 (15)				
1059	5		CLAYEY SAND, brown, moist, stiff, with gravel, (Fill)	SS 2		5-5-5 (10)				
			GRAVELLY CLAY, brown, damp, very stiff, (Fill), sandy	SS 3		9-10-12 (22)				
1054	10		CLAYEY SAND, tannish brown, moist, medium dense, with gravel, (Fill)	SS 4		8-15-15 (30)				
1049	15		SANDY CLAY, grayish brown, moist, very stiff, with gravel, (Fill)	SS 5		10-15-12 (27)				

Bottom of borehole at 15.0 feet.

GEOTECH BH COLUMNS - GEOTECH TEMPLATE.GDT - 10/19/18 14:11 - R:\01 - INFRASTRUCTURE DESIGN_2018 PROJECTS_WOOD ST LOUIS\PS-902 STORE - FITCHBURG, WI\03 - DRILLING\BORING LOGS.GPJ

Wood
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Telephone: (615) 333-0630

BORING B-26

PROJECT NAME Pick N Save 902
CLIENT Kroger Company
PROJECT NUMBER 242418135
PROJECT LOCATION Fitchburg, WI
DATE STARTED 9/18/18 **COMPLETED** 9/18/18
GROUND ELEVATION 1068 ft **HOLE SIZE** 4"
DRILLING CONTRACTOR TSC
DRILLING TERMINATION DEPTH 15 ft / Elev 1053 ft
DRILLING METHOD SFA
REFUSAL DEPTH N/A
DRILLING EQUIPMENT Morooka LTX800
GROUND WATER LEVELS:
HAMMER TYPE Automatic
AT END OF DRILLING Dry
LOGGED BY Nathan Brown **CHECKED BY** Nathan Long
24hrs AFTER DRILLING Not measured (backfilled at completion)
NOTES

ELEV. (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ (10 20 30 40)	MOISTURE CONTENT (%)	ATT. LIMITS: LIQUID LIMIT	ATT. LIMITS: PLASTICITY INDEX
1068	0		6" GRAVELLY SAND with cobbles							
			CLAYEY SAND, grayish brown, moist, medium dense, with gravel, (Fill)	SS 1		6-9-19 (28)				
1063	5		SILTY SAND, grayish brown, damp to moist, stiff to very stiff, trace gravel, (Fill)	SS 2		5-6-5 (11)		9	NP	NP
				SS 3		7-14-14 (28)				
1058	10			SS 4		2-10-9 (19)				
1053	15		SILTY SAND, brown to tannish pink, moist to dry, dense to very dense, (Residuum)	SS 5		6-34-38 (72)	>>			

Bottom of borehole at 15.0 feet.

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wood.
Wood
3800 Ezell Road, Suite 100
Nashville, TN 37211
Telephone: (615) 333-0630

BORING B-27

PROJECT NAME Pick N Save 902
PROJECT NUMBER 242418135
DATE STARTED 9/18/18 **COMPLETED** 9/18/18
DRILLING CONTRACTOR TSC
DRILLING METHOD SFA
DRILLING EQUIPMENT Morooka LTX800
HAMMER TYPE Automatic
LOGGED BY Nathan Brown **CHECKED BY** Nathan Long
NOTES

CLIENT Kroger Company
PROJECT LOCATION Fitchburg, WI
GROUND ELEVATION 1074 ft **HOLE SIZE** 4"
DRILLING TERMINATION DEPTH 15 ft / Elev 1059 ft
REFUSAL DEPTH N/A
GROUND WATER LEVELS:
AT END OF DRILLING Dry
24hrs AFTER DRILLING Not measured (backfilled at completion)

ELEV. (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ (10 20 30 40)	MOISTURE CONTENT (%)	ATT. LIMITS: LIQUID LIMIT	ATT. LIMITS: PLASTICITY INDEX
1074	0		6" GRAVELLY SAND with cobbles							
			CLAYEY SAND, grayish brown, damp, medium dense, with gravel, (Fill)	SS 1		7-10-11 (21)				
1069	5			SS 2		4-6-5 (11)				
			GRAVELLY SAND, tannish orange, possible fill or residuum	SS 3		5-11-15 (26)				
1064	10			SS 4		7-10-10 (20)				
			SAND, orangeish brown, moist, probable weak and/or weathered sandstone. (Bedrock)							
1059	15			SS 5		50/3"	>>			

Bottom of borehole at 15.0 feet.

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Nashville, TN 37211
Telephone: (615) 333-0630

BORING B-28

PROJECT NAME Pick N Save 902
CLIENT Kroger Company
PROJECT NUMBER 242418135
PROJECT LOCATION Fitchburg, WI
DATE STARTED 9/21/18 **COMPLETED** 9/21/18
GROUND ELEVATION 1062 ft **HOLE SIZE** 4"
DRILLING CONTRACTOR TSC
DRILLING TERMINATION DEPTH 15 ft / Elev 1047 ft
DRILLING METHOD SFA
REFUSAL DEPTH N/A
DRILLING EQUIPMENT Morooka LTX800
GROUND WATER LEVELS:
HAMMER TYPE Automatic
AT END OF DRILLING 6.00 ft / Elev 1056.00 ft
LOGGED BY Nathan Brown **CHECKED BY** Nathan Long
24hrs AFTER DRILLING Not measured (backfilled at completion)
NOTES

ELEV. (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ (10 20 30 40)	MOISTURE CONTENT (%)	ATT. LIMITS: LIQUID LIMIT	ATT. LIMITS: PLASTICITY INDEX
1062	0		6" GRAVELLY SAND with cobbles							
			SILTY SAND, brown, moist, medium dense, with gravel, (Fill)	SS 1		6-7-7 (14)				
1057	5			SS 2		3-6-5 (11)				
			SANDY GRAVEL, brown, wet, loose to very loose, (Fill)	SS 3		7-6-4 (10)				
1052	10			SS 4		3-1-1 (2)				
			SAND, tannish yellow, wet, medium dense, possible fill							
1047	15			SS 5		6-9-12 (21)				

Bottom of borehole at 15.0 feet.

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Telephone: (615) 333-0630

BORING B-29

PROJECT NAME Pick N Save 902
CLIENT Kroger Company
PROJECT NUMBER 242418135
PROJECT LOCATION Fitchburg, WI
DATE STARTED 9/21/18 **COMPLETED** 9/21/18
GROUND ELEVATION 1061 ft **HOLE SIZE** 4"
DRILLING CONTRACTOR TSC
DRILLING TERMINATION DEPTH 15 ft / Elev 1046 ft
DRILLING METHOD SFA
REFUSAL DEPTH N/A
DRILLING EQUIPMENT Morooka LTX800
GROUND WATER LEVELS:
HAMMER TYPE Automatic
AT END OF DRILLING Dry
LOGGED BY Nathan Brown **CHECKED BY** Nathan Long
24hrs AFTER DRILLING Not measured (backfilled at completion)
NOTES

ELEV. (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ (10 20 30 40)	MOISTURE CONTENT (%)	ATT. LIMITS: LIQUID LIMIT	ATT. LIMITS: PLASTICITY INDEX
1061	0		6" GRAVELLY SAND with cobbles SAND, brown, moist, medium dense, with gravel, (Fill)	SS 1		9-7-11 (18)		8		
1056	5		SANDY CLAY, grayish brown, moist, very stiff to stiff, with gravel, (Fill)	SS 2		8-7-11 (18)		9		
				SS 3		4-5-8 (13)		13		
1051	10		SILTY SAND, brown, moist, medium dense, trace gravel, (Fill)	SS 4		9-10-14 (24)		9		
1046	15		SANDY CLAY, grayish brown, moist, stiff, with gravel, (Fill), refusal likely on boulder/cobble	SS 5		8-50/4"	>>▲	11		

Bottom of borehole at 15.0 feet.

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3800 Ezell Road, Suite 100
Nashville, TN 37211
Telephone: (615) 333-0630

BORING B-30

PROJECT NAME Pick N Save 902
PROJECT NUMBER 242418135
DATE STARTED 9/21/18 **COMPLETED** 9/21/18
DRILLING CONTRACTOR TSC
DRILLING METHOD SFA
DRILLING EQUIPMENT Morooka LTX800
HAMMER TYPE Automatic
LOGGED BY Nathan Brown **CHECKED BY** Nathan Long
NOTES

CLIENT Kroger Company
PROJECT LOCATION Fitchburg, WI
GROUND ELEVATION 1060 ft **HOLE SIZE** 4"
DRILLING TERMINATION DEPTH 15 ft / Elev 1045 ft
REFUSAL DEPTH N/A
GROUND WATER LEVELS:
AT END OF DRILLING Dry
24hrs AFTER DRILLING Not measured (backfilled at completion)

ELEV. (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ (10 20 30 40)	MOISTURE CONTENT (%)	ATT. LIMITS: LIQUID LIMIT	ATT. LIMITS: PLASTICITY INDEX
1060	0		6" GRAVELLY SAND with cobbles							
			SAND, brown, moist, medium dense, with silt, (Fill)	SS 1		11-7-9 (16)				
			SANDY CLAY, grayish brown, moist, very stiff, with gravel, (Fill), asphalt chuncks at 3.5	SS 2		50/5"	>>			
1055	5									
			SILTY SAND, brown, moist, dense to medium dense, trace gravel, (Fill)	SS 3		14-15-17 (32)				
1050	10			SS 4		7-10-13 (23)				
				SS 5		8-8-20/0"	>>			
1045	15									

Bottom of borehole at 15.0 feet.

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wood.

Wood
3800 Ezell Road, Suite 100
Nashville, TN 37211
Telephone: (615) 333-0630

BORING B-31

PROJECT NAME Pick N Save 902
PROJECT NUMBER 242418135
DATE STARTED 9/21/18 **COMPLETED** 9/21/18
DRILLING CONTRACTOR TSC
DRILLING METHOD HSA
DRILLING EQUIPMENT Morooka LTX800
HAMMER TYPE Automatic
LOGGED BY Nathan Brown **CHECKED BY** Nathan Long
NOTES

CLIENT Kroger Company
PROJECT LOCATION Fitchburg, WI
GROUND ELEVATION 1077 ft **HOLE SIZE** 6"
DRILLING TERMINATION DEPTH 50 ft / Elev 1027 ft
REFUSAL DEPTH N/A
GROUND WATER LEVELS:
AT END OF DRILLING Dry
24hrs AFTER DRILLING Not measured (backfilled at completion)

ELEV. (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ (10 20 30 40)	MOISTURE CONTENT (%)	ATT. LIMITS: LIQUID LIMIT	ATT. LIMITS: PLASTICITY INDEX
1077	0		Surface vegitated							
			SANDY CLAY, brown to grayish brown, moist, medium stiff to soft, (Fill)							
1072	5									
1067	10									
			SANDY CLAY, dark grayish brown, moist, soft, trace roots, possible brick fragments. Possible fill							
1062	15			SS 1		0-1-2 (3)				
			SANDY CLAY, gray, moist, medium stiff, with gravel, possible till							
1057	20			SS 2		1-3-4 (7)				
1052	25			SS 3		8-6-4 (10)				
			CLAY, brown, moist, medium stiff, trace gravel							
1047	30			SS 4		2-4-4 (8)				
			SAND, tannish brown to yellowish pink, damp to dry, dense to very dense, with sandstone fragments. Loose seam at 40'. Probable residuum.							
1042	35			SS 5		14-20-17 (37)				
1037	40			SS 6		18-1-1 (2)				

(Continued Next Page)

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3800 Ezell Road, Suite 100
Nashville, TN 37211
Telephone: (615) 333-0630

BORING B-31

PROJECT NAME Pick N Save 902 **CLIENT** Kroger Company

PROJECT NUMBER 242418135 **PROJECT LOCATION** Fitchburg, WI

ELEV. (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ 10 20 30 40	MOISTURE CONTENT (%)	ATT. LIMITS LIQUID LIMIT	ATT. LIMITS PLASTICITY INDEX
1037	40		SAND, tannish brown to yellowish pink, damp to dry, dense to very dense, with sandstone fragments. Loose seam at 40'. Probable residuum. *(continued)*							
1032	45			SS 7		4-50-50/1"	>>▲			
			SAND, tannish white, and sandstone fragments. Probable weak and/or weathered sandstone							
1027	50			SS 8		50/1"	>>▲			

Bottom of borehole at 50.0 feet.

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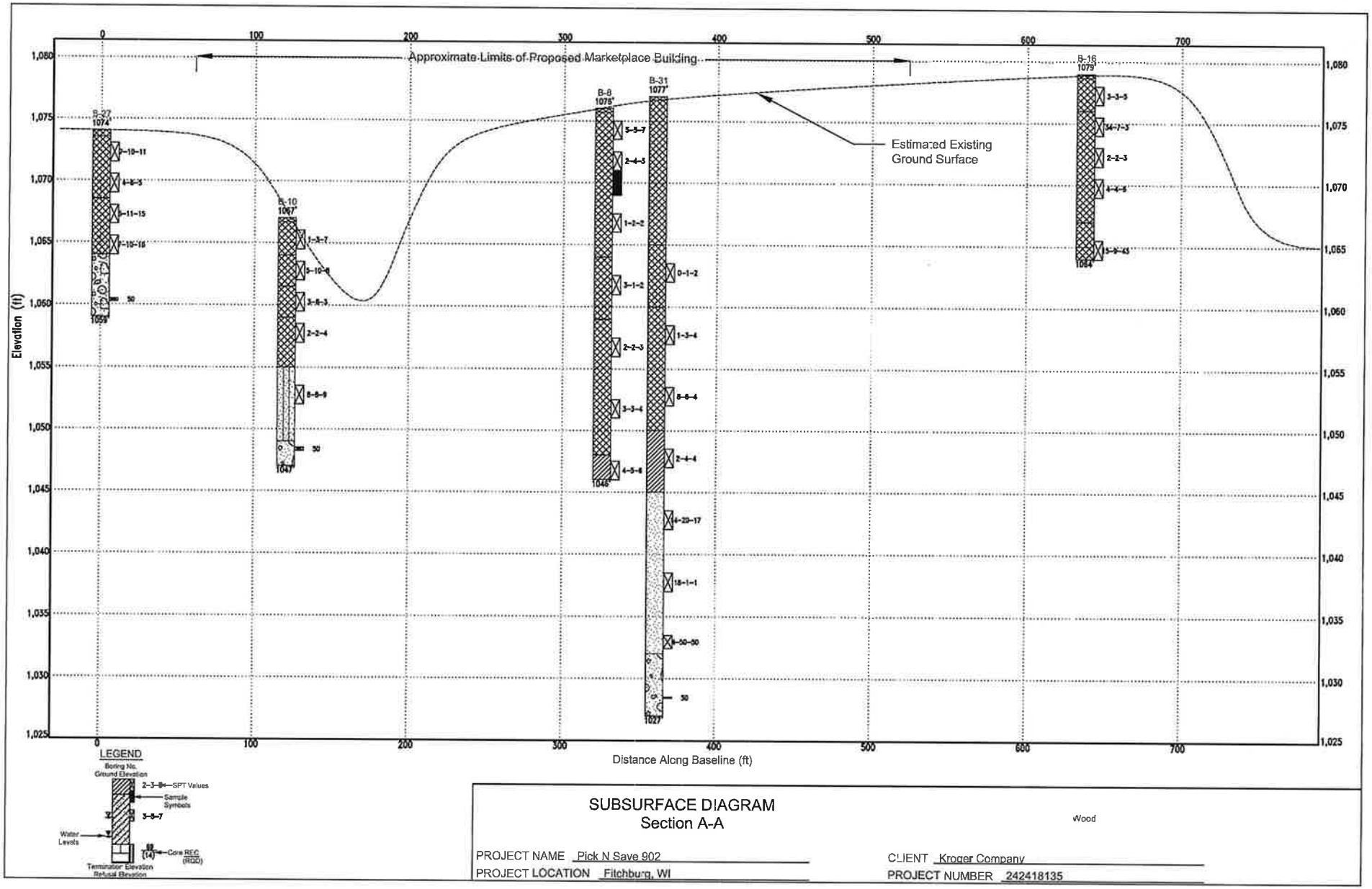


SUBSURFACE DIAGRAM
Section A-A

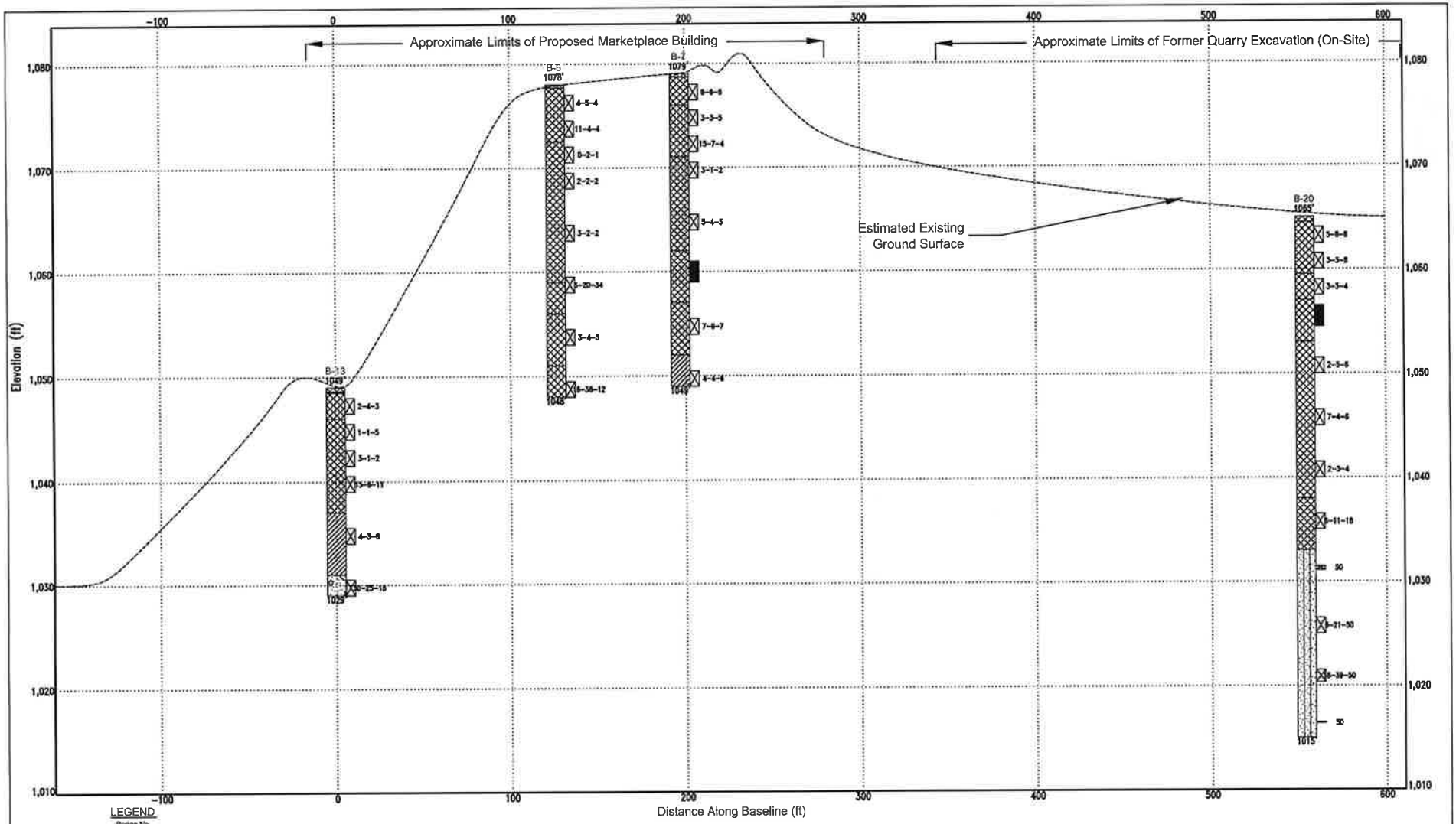
Wood

PROJECT NAME Pick N Save 902

PROJECT LOCATION Fitchburg, WI

CLIENT Kroger Company

PROJECT NUMBER 242418135



SUBSURFACE DIAGRAM
Section B-B

Wood

PROJECT NAME Pick N Save 902

PROJECT LOCATION Fitchburg, WI

CLIENT Kroger Company

PROJECT NUMBER 242418135

wood.

APPENDIX 3

GEOTECHNICAL LABORATORY TEST RESULTS

Wood Environment and Infrastructure Solutions, Inc.
5211 Linbar Drive, Suite 513, Nashville, Tennessee 37211 USA
(615) 831-9202

wood.

SUMMARY OF LABORATORY TEST RESULTS

PROJECT: Proposed Pick 'n Save Marketplace (PS-902) **PROJECT NO.:** 2424-18-135 **DATE:** 10/19/2018

BORING NO.	SAMPLE NUMBER	SAMPLE TYPE	DEPTH (FT.)	NATURAL MOISTURE (%)	PERCENT GRAVEL (%)	PERCENT SAND (%)	PERCENT SILT /CLAY (%)	ATTERBERG LIMITS			UNIFIED SOIL CLASSIFICATION	AASHTO CLASSIFICATION	OTHER TESTS **	SOIL DESCRIPTION
								LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX				
B-1	S-1	SS	1.0-2.5	17.4	7.4	21.6	71.0	34	14	20	CL			lean clay with sand, gray brown
B-1	S-2	SS	3.5-5.0	13.8										
B-1	S-3	SS	6.0-7.5	12.2										
B-1	S-4	SS	8.5-10.0	18.1										
B-4	S-2	SS	3.5-5.0	11.0	12.7	41.3	46.0	22	13	9	SC			clayey sand, gray brown
B-6	Bulk	Bulk	1.0-10.0	18.5	4.5	52.6	42.9	NV	NP	NP	SM		P,RE,pH	silty sand, dark brown
B-7	S-1	SS	1.0-2.5	12.4										
B-7	S-2	SS	3.5-5.0	13.6										
B-7	S-4	SS	8.5-10.0	16.4										
B-7	S-5	SS	13.5-15.0	15.1	10.2	44.0	45.8	NV	NP	NP	SM			silty sand, gray brown
B-7	ST-1	ST	18.0-20.0	15.6	8.4	43.6	48.0	22	14	8	SC		U	clayey sand, gray brown
B-8	S-5	SS	18.5-20.0	16.8	4.0	35.5	60.5	22	12	10	CL			sandy lean clay, gray brown
B-9	S-1	SS	1.0-2.5	8.6	8.5	46.7	44.8	NV	NP	NP	SM			silty sand, tan brown
B-10	S-2	SS	3.5-5.0	11.2	6.8	37.4	55.8	NV	NP	NP	ML			sandy silt, gray brown
B-11	ST-1	ST	8.0-10.0	13.4	15.6	37.9	46.5	NV	NP	NP	SM		U,C	silty sand with gravel, gray brown
B-11	S-5	SS	13.5-15.0	10.6	7.3	43.8	48.9	18	13	5	SC-SM			silty, clayey sand, gray brown

GEOTECHNICAL AND CONSTRUCTION MATERIALS LABORATORY

Wood Environment and Infrastructure Solutions, Inc.
5211 Linbar Drive, Suite 513, Nashville, Tennessee 37211 USA
(615) 831-9202

wood.

BORING NO.	SAMPLE NUMBER	SAMPLE TYPE	DEPTH (FT.)	NATURAL MOISTURE (%)	PERCENT GRAVEL (%)	PERCENT SAND (%)	PERCENT SILT /CLAY (%)	ATTERBERG LIMITS			UNIFIED SOIL CLASSIFICATION	AASHTO CLASSIFICATION	OTHER TESTS **	SOIL DESCRIPTION
								LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX				
B-12	S-3	SS	6.0-7.5	9.6	24.6	40.9	34.5	NV	NP	NP	SM			silty sand with gravel, gray brown
B-13	S-1	SS	1.0-2.5	106.5	32.0	50.9	17.1	NV	NP	NP	SM			silty sand with gravel, white
B-19	S-1	SS	1.0-2.5	8.5	15.7	51.5	32.8	NV	NP	NP	SM			silty sand with gravel, gray brown
B-20	ST-1	ST	8.5-10.5	9.9	14.8	44.5	40.7	27	16	11	SC		U,C	clayey sand with gravel, gray brown
B-20	S-9	SS	38.5-40.0	7.7	13.3	71.4	15.3	NV	NP	NP	SM			silty sand, tan brown
B-21	S-2	SS	3.5-5.0	9.3	14.2	52.3	33.5	NV	NP	NP	SM			silty sand, gray brown
B-24	S-8	SS	28.5-30.0	13.4	37.2	32.0	30.8	19	14	5	GC-GM			silty clayey gravel with sand, brown
B-26	S-2	SS	3.5-5.0	9.0	9.5	61.9	28.6	NV	NP	NP	SM			silty sand, gray brown
B-29	S-1	SS	1.0-2.5	8.1										
B-29	S-2	SS	3.5-5.0	9.4										
B-29	S-3	SS	6.0-7.5	12.8										
B-29	S-4	SS	8.5-10.0	8.6										
B-29	S-5	SS	13.5-15.0	10.6										
B29/B30	Bulk	Bulk	1.0-15.0	10.1	4.2	64.6	31.2	NV	NP	NP	SM		CBR,P, RE,pH	silty sand, tan brown

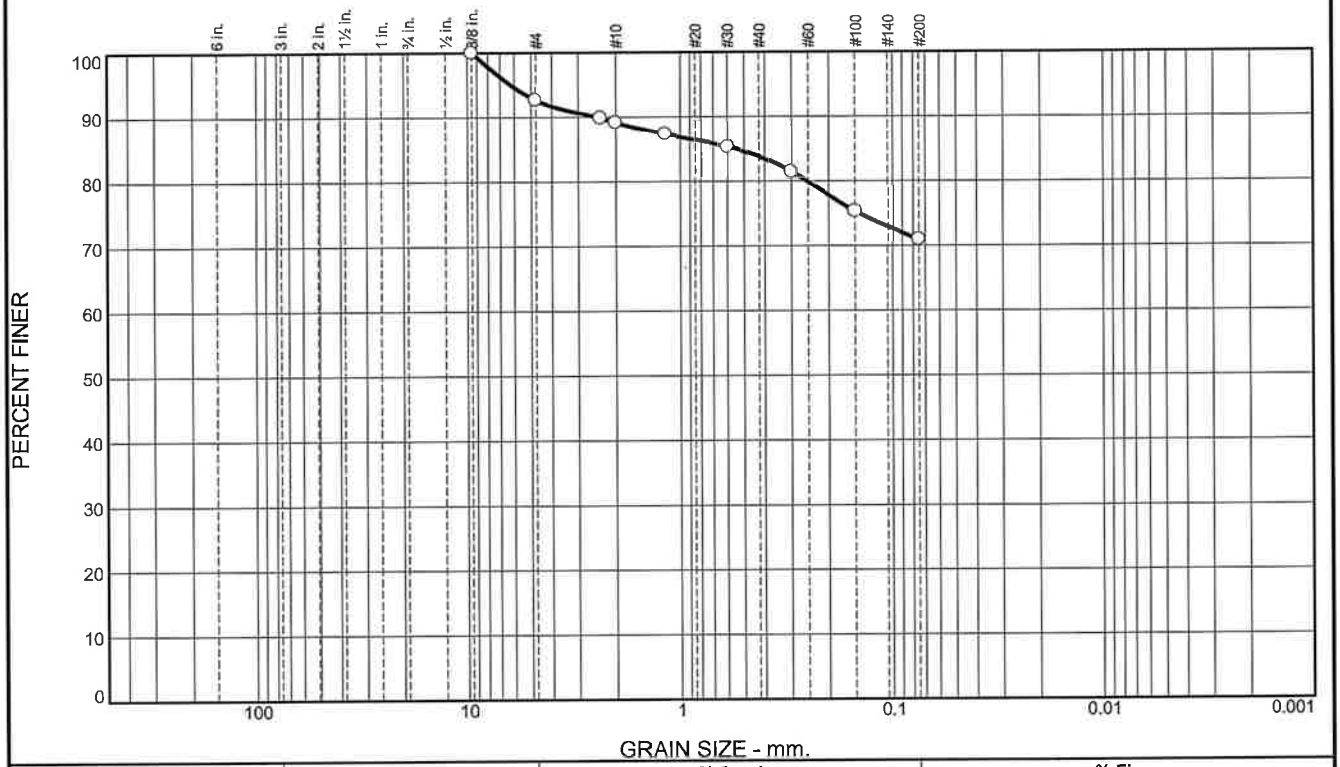
* ST-SHELBY TUBE, SS-SPLIT SPOON / SPLIT-BARREL SAMPLER, B-BAG / BULK, C-CORE

** C-Consolidation Test
S-Grain Size Analysis
G-Specific Gravity
R-Relative Density
P-Proctor
D-Direct Shear
H-Hydrometer
pH-acidity
E- Electrical Resistivity
K - Permeability
SL-Shrinkage Limits
U-Unconfined Compression Test
O-Fractional Organic Carbon
CBR-California Bearing Ratio
T-Triaxial Compression Test

Notes:

DATA CHECKED BY NCL

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	7.4	3.5	5.4	12.7	71.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/8"	100.0		
#4	92.6		
#8	89.8		
#10	89.1		
#16	87.3		
#30	85.3		
#50	81.4		
#100	75.3		
#200	71.0		

* (no specification provided)

Material Description

lean clay with sand, gray brown

Atterberg Limits

PL= 14 LL= 34 PI= 20

Coefficients

D_{90}= 2.4699 D_{85}= 0.5516 D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-6(12)

Remarks

Source of Sample: B-1 **Depth:** 1.0'-2.5'
Sample Number: SS-1

Date: 10/04/18

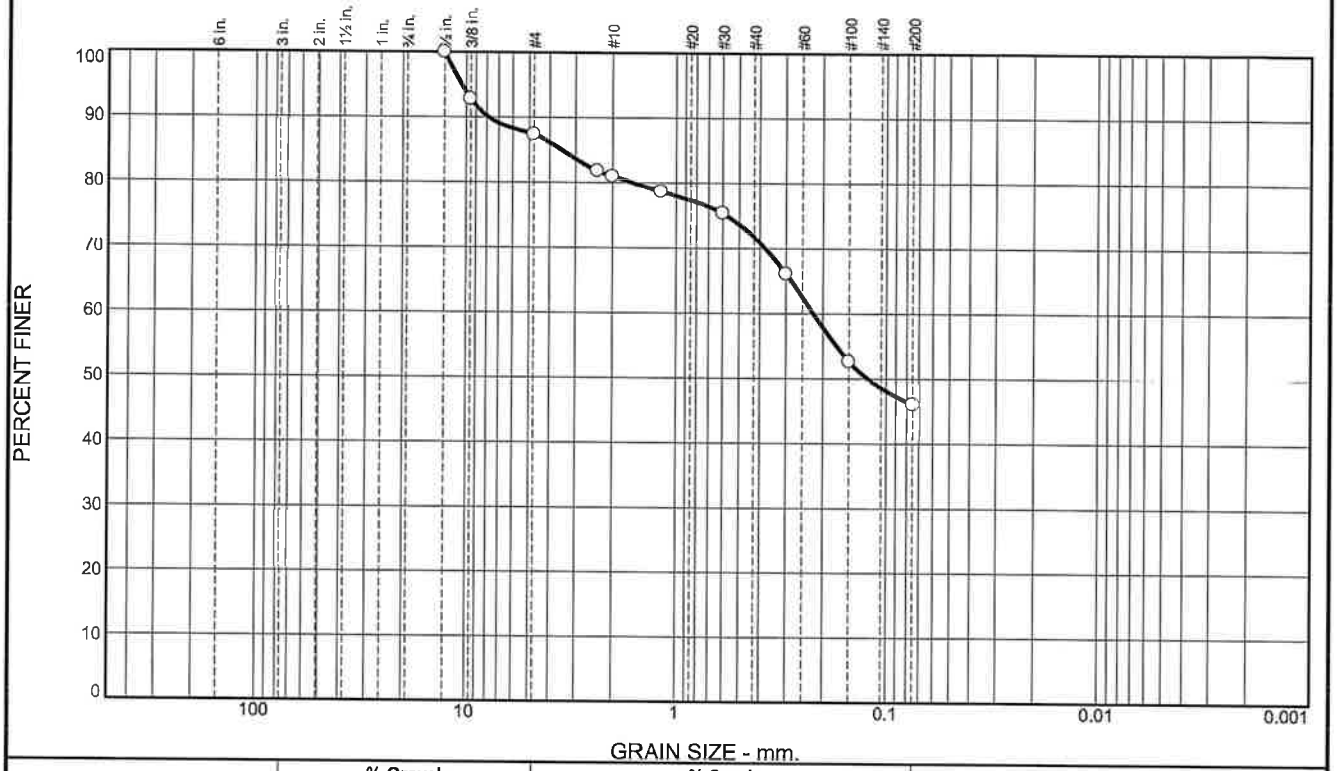
Wood Environment and Infrastructure Solutions, Inc.
Nashville, Tennessee

Client: The Kroger Company
Project: Pick N Save 902

Project No: 242418135

Tested By: NB **Checked By:** MH

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	12.7	6.3	9.3	25.7	46.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1/2"	100.0		
3/8"	92.8		
#4	87.3		
#8	81.8		
#10	81.0		
#16	78.6		
#30	75.4		
#50	66.1		
#100	52.7		
#200	46.0		

* (no specification provided)

Material Description

clayey sand, gray brown

Atterberg Limits

PL= 13 LL= 22 PI= 9

Coefficients

D_{90}= 7.8439 D_{85}= 3.4951 D_{60}= 0.2217
D_{50}= 0.1224 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SC AASHTO= A-4(1)

Remarks

Source of Sample: B-4 **Depth:** 3.5'-5.0'
Sample Number: SS-2

Date: 10/04/18

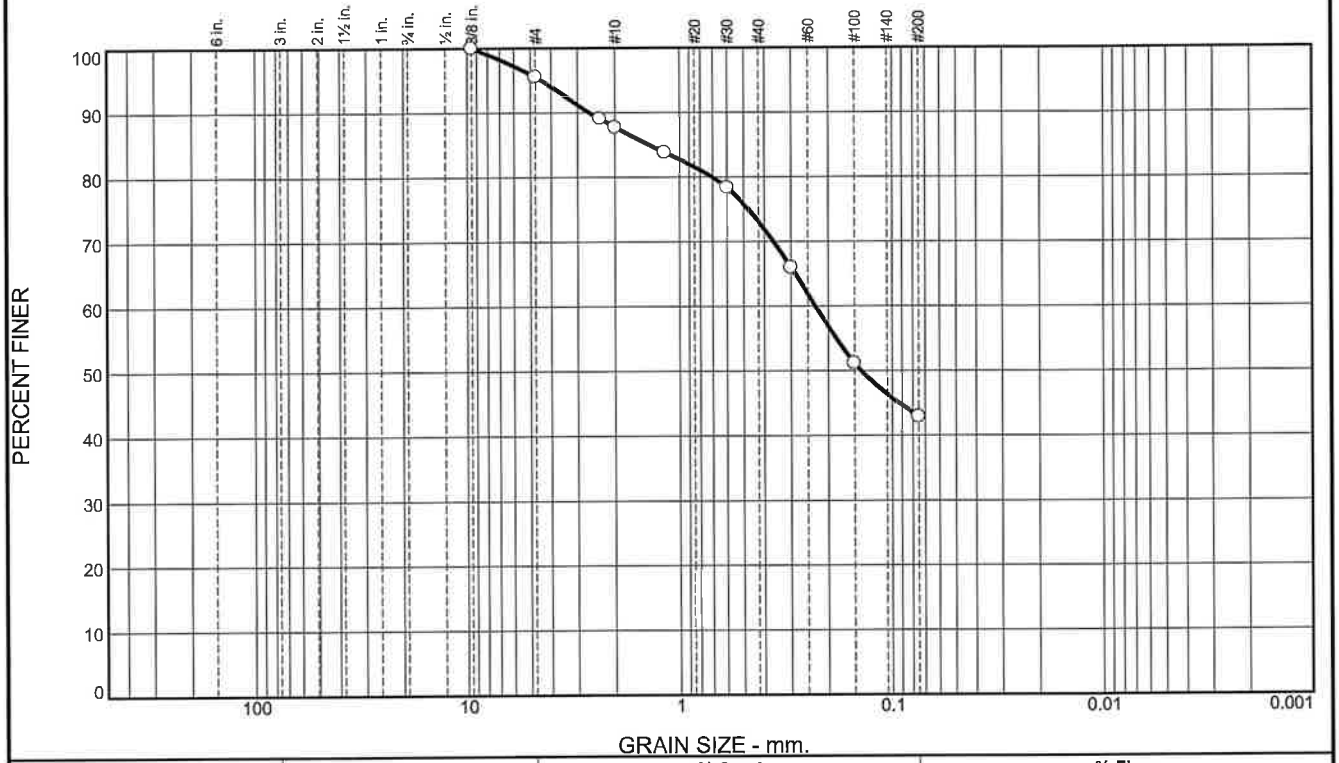
Wood Environment and Infrastructure Solutions, Inc.
Nashville, Tennessee

Client: The Kroger Company
Project: Pick N Save 902

Project No: 242418135

Tested By: NB **Checked By:** MH

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	4.5	7.8	14.7	30.1	42.9	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/8"	100.0		
#4	95.5		
#8	89.0		
#10	87.7		
#16	83.7		
#30	78.3		
#50	66.0		
#100	51.2		
#200	42.9		

* (no specification provided)

Material Description

silty sand, dark brown

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 2.6415 D_{85}= 1.4137 D_{60}= 0.2303
D_{50}= 0.1398 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SM AASHTO= A-4(0)

Remarks

Source of Sample: B-6 **Depth:** 1.0'-10.0'
Sample Number: Bulk

Date: 9/28/18

Wood Environment and Infrastructure Solutions, Inc.
Nashville, Tennessee

Client: The Kroger Company
Project: Pick N Save 902

Project No: 242418135

Tested By: KM **Checked By:** MH

COMPACTION TEST REPORT

Test specification: ASTM D 698-12 Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
1.0'-10.0'	SM	A-4(0)			NV	NP	4.5	42.9

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 115.6 pcf Optimum moisture = 13.7 %	silty sand, dark brown

Project No. 242418135 **Client:** The Kroger Company
Project: Pick N Save 902

○ **Source of Sample:** B-6 **Sample Number:** Bulk

Remarks:

Wood Environment and Infrastructure Solutions, Inc.
Nashville, Tennessee

Tested By: KM **Checked By:** MH

Wood
Enviromental and Infrastructure Solutions, Inc.
Nashville, TN

pH & Resistivity of Soils

ASTM D4972 & ASTM G57

CLIENT: Kroger Company
PROJECT NO.: 2424-18-135
PROJECT NAME: Pick n Save 902
DATE: September 26, 2018
Reviewed By:
Tested By: KM/MH
Boring B-6 **Sample Type** Bulk **Depth** 1.0'-10.0'
Description silty sand
Color dark brown

pH of Soil

Preperation Method

Seived through #10:	YES	X	NO	
Removal of gravel or other materials from original sample:	YES		NO	X

Test Method

Method A (pH Meter) X
Method B (pH Paper)

Container ID: 11
Sample Temperature: 21.6

pH Value 8.64

Resistivity of Soil

Resistivity Meter Make & Model: DUOYI DY4300
Soil Box Factor: 1

Container ID: SB-1
Sample Temperature: 21.9

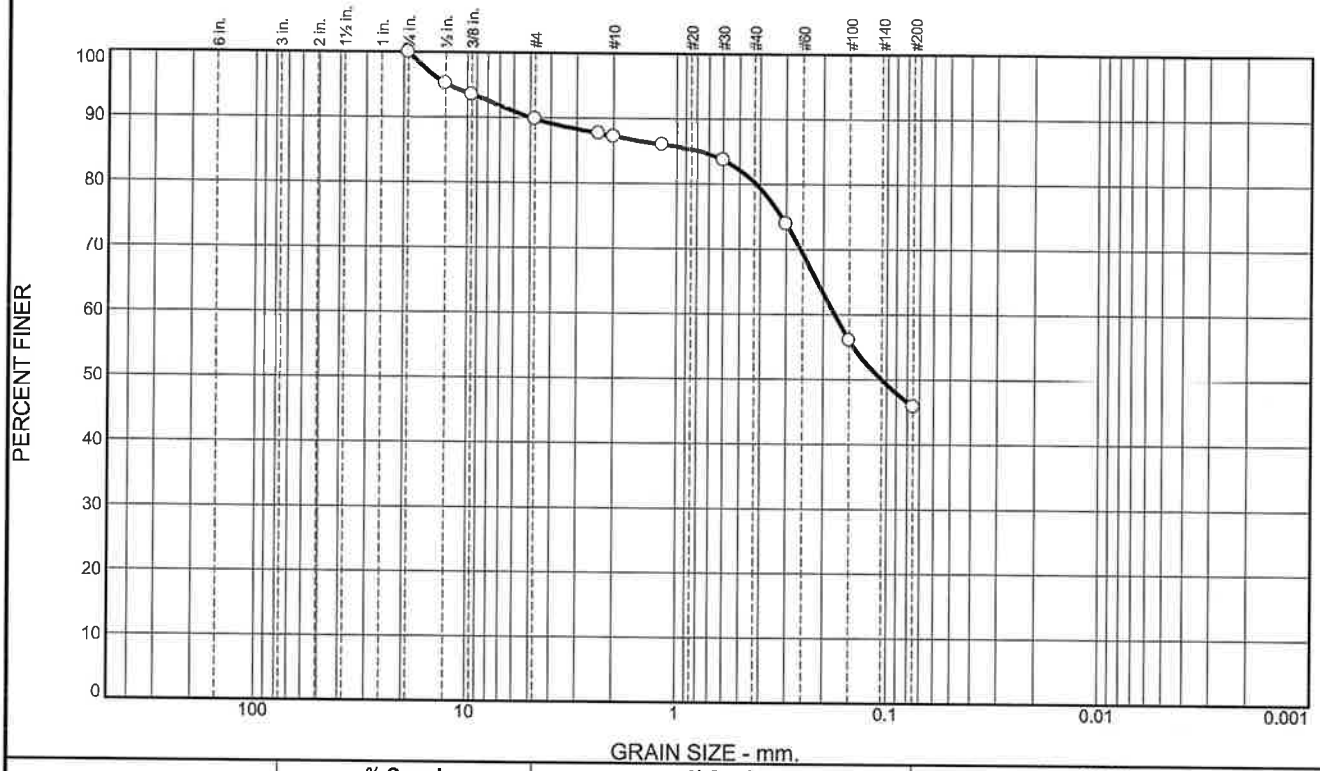
Resistivity (ohms/cm) 2800

Remarks

Wood
Environemental and Infrastructure Solutions, Inc.
5211 Linbar Drive, Suite 513
Nashville, TN USA 37211

Office:615.333.0630
Lab: 615.831.9202
www.woodplc.com

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	10.2	2.6	7.0	34.4	45.8	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4"	100.0		
1/2"	95.1		
3/8"	93.5		
#4	89.8		
#8	87.6		
#10	87.2		
#16	85.9		
#30	83.7		
#50	73.9		
#100	56.0		
#200	45.8		

* (no specification provided)

Material Description

silty sand, gray brown

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 4.9914 D_{85}= 0.7844 D_{60}= 0.1767
D_{50}= 0.1060 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SM AASHTO= A-4(0)

Remarks

Source of Sample: B-7 **Depth:** 13.5'-15.0'
Sample Number: SS-5

Date: 10/04/18

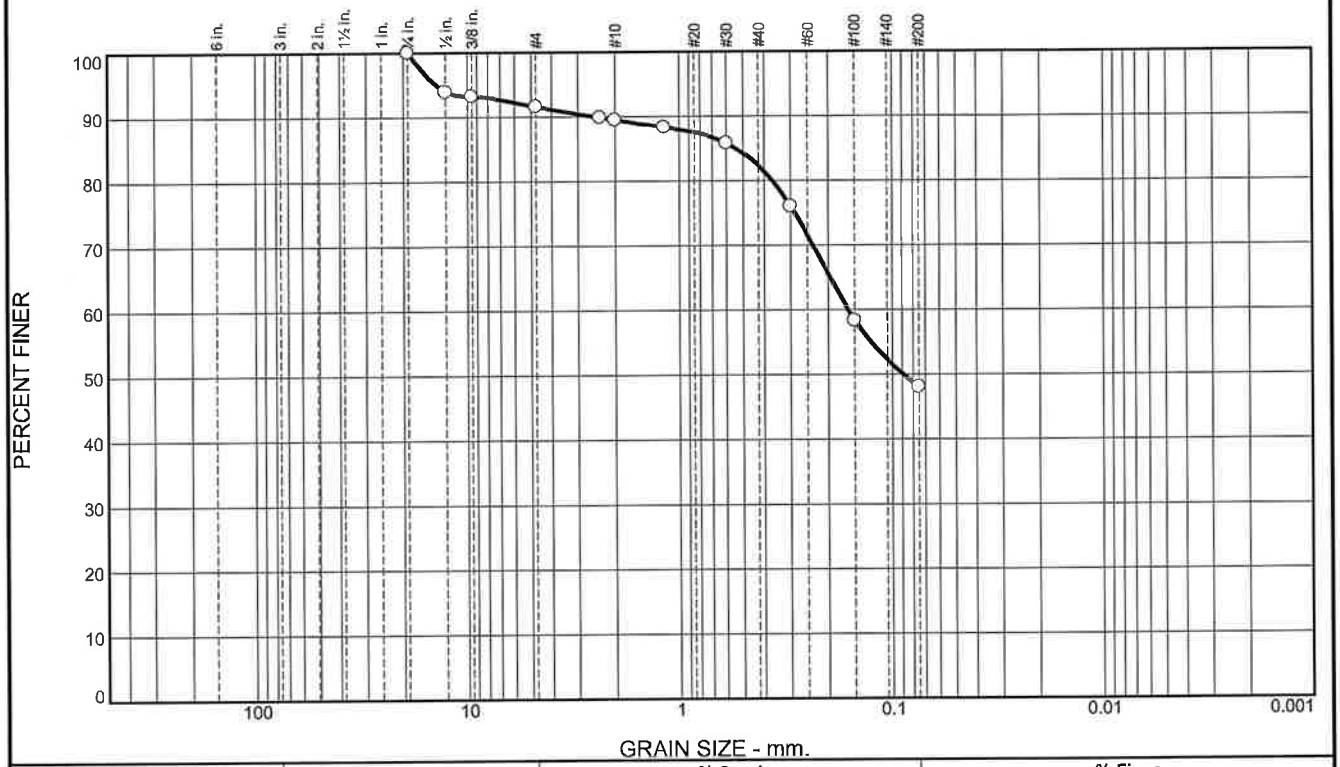
Wood Environment and Infrastructure Solutions, Inc.
Nashville, Tennessee

Client: The Kroger Company
Project: Pick N Save 902

Project No: 242418135

Tested By: NB **Checked By:** MH

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	8.4	2.1	7.3	34.2	48.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4"	100.0		
1/2"	93.9		
3/8"	93.2		
#4	91.6		
#8	89.9		
#10	89.5		
#16	88.3		
#30	85.8		
#50	76.0		
#100	58.3		
#200	48.0		

* (no specification provided)

Material Description

clayey sand, gray brown

Atterberg Limits

PL= 14 LL= 22 PI= 8

Coefficients

D_{90}= 2.4896 D_{85}= 0.5438 D_{60}= 0.1615
D_{50}= 0.0888 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SC AASHTO= A-4(1)

Remarks

Source of Sample: B-7 **Depth:** 18.0'-20.0'
Sample Number: ST-1

Date: 10/11/18

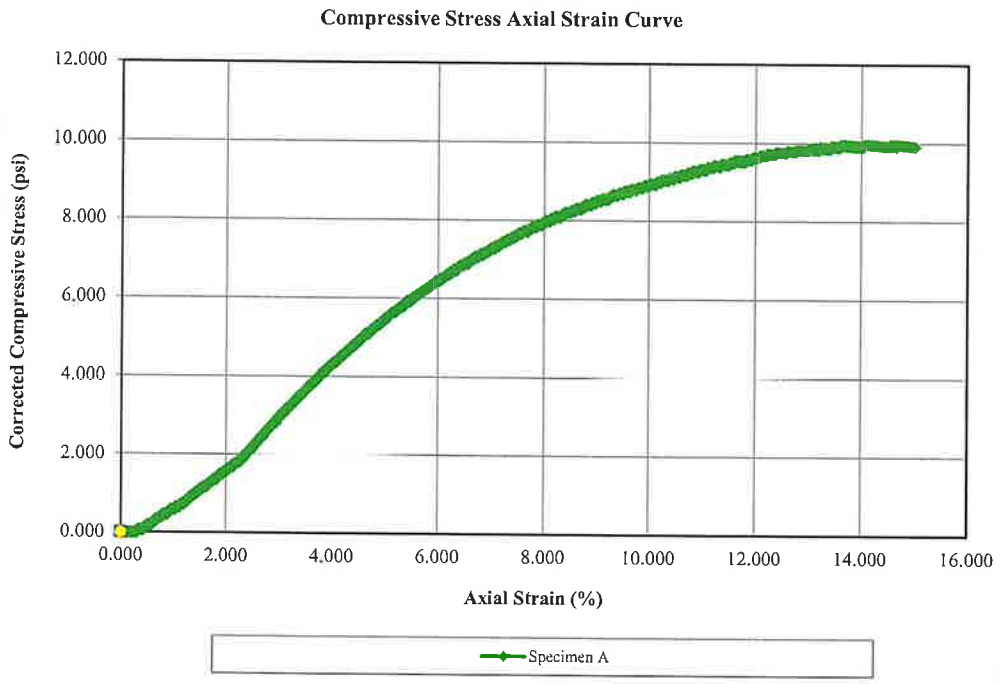
Wood Environment and Infrastructure Solutions, Inc.
Nashville, Tennessee

Client: The Kroger Company
Project: Pick N Save 902

Project No: 242418135

Tested By: NB/MH **Checked By:** MH

Unconfined Compression Test Report (ASTM D2166)



Before Test	Specimen A	FAILURE PHOTO
Water Content (%)	15.33	
Dry Density (pcf)	118.600	
Saturation (%)	102.95	
Void Ratio	0.40	
Diameter (in)	2.819	
Height (in)	5.560	
Test Data	**A**	
Unconfined Strength (psi)	9.958	
Undrained Shear Strength (tsf)	0.359	
Undrained Shear Strength (psi)	4.979	
Rate of Strain (in/min)	0.056000	
Strain at Failure (%)	15.02	

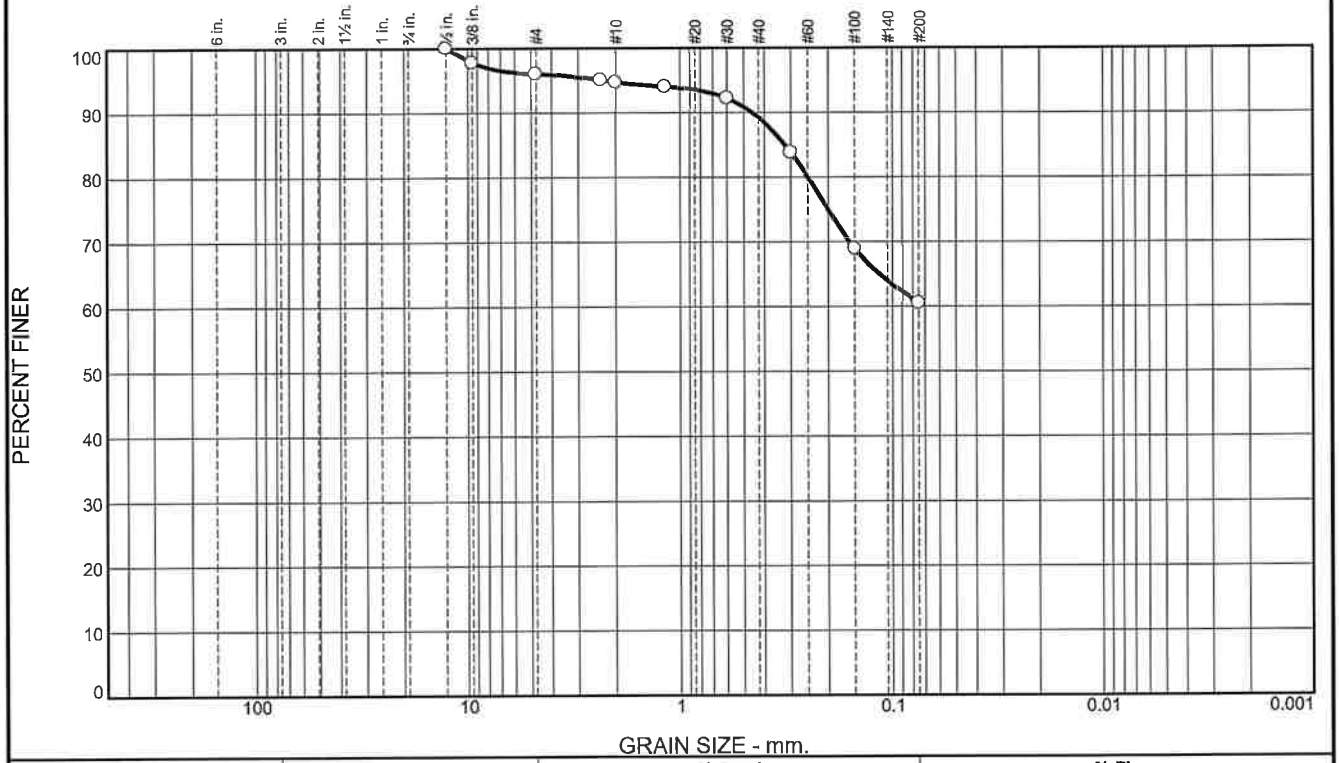
Project Information		Specimen Description
Client	The Kroger Company	Specimen A
Project	Kroger Pick n Save 902	
Project No.	242418135	
Boring No.	B-7 ST-1 18.0'-20.0'	
Sample Description	clayey sand, gray brown	

Test Variables	
Specific Gravity	2.65
Liquid Limit:	22.0
Plastic Limit:	14.0

Remarks

Tested By: M. Haley Reviewed By: _____

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	4.0	1.4	5.4	28.7	60.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1/2"	100.0		
3/8"	97.8		
#4	96.0		
#8	95.0		
#10	94.6		
#16	93.9		
#30	92.2		
#50	83.8		
#100	68.9		
#200	60.5		

* (no specification provided)

Material Description

sandy lean clay, gray brown

Atterberg Limits

PL= 12 LL= 22 PI= 10

Coefficients

D_{90}= 0.4574 D_{85}= 0.3203 D_{60}=
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= CL AASHTO= A-4(3)

Remarks

Source of Sample: B-8 **Depth:** 18.5'-20.0'
Sample Number: SS-5

Date: 10/04/18

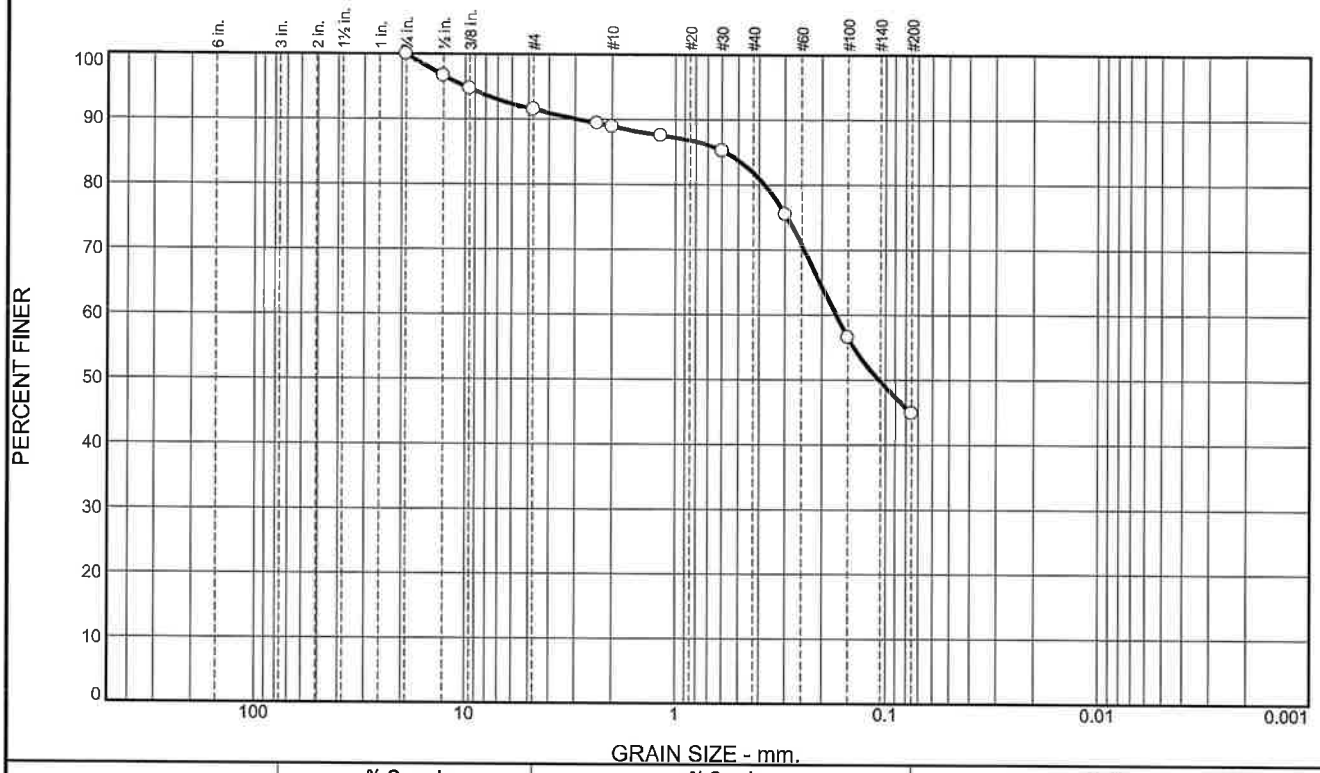
Wood Environment and Infrastructure Solutions, Inc.
Nashville, Tennessee

Client: The Kroger Company
Project: Pick N Save 902

Project No: 242418135

Tested By: NB **Checked By:** MH

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	8.5	2.6	7.1	37.0	44.8	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4"	100.0		
1/2"	96.7		
3/8"	94.7		
#4	91.5		
#8	89.4		
#10	88.9		
#16	87.5		
#30	85.2		
#50	75.5		
#100	56.5		
#200	44.8		

* (no specification provided)

Material Description

silty sand, tan brown

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 2.9235 D_{85}= 0.5820 D_{60}= 0.1717
D_{50}= 0.1076 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SM AASHTO= A-4(0)

Remarks

Source of Sample: B-9 **Depth:** 1.0'-2.5'
Sample Number: SS-1

Date: 10-04-18

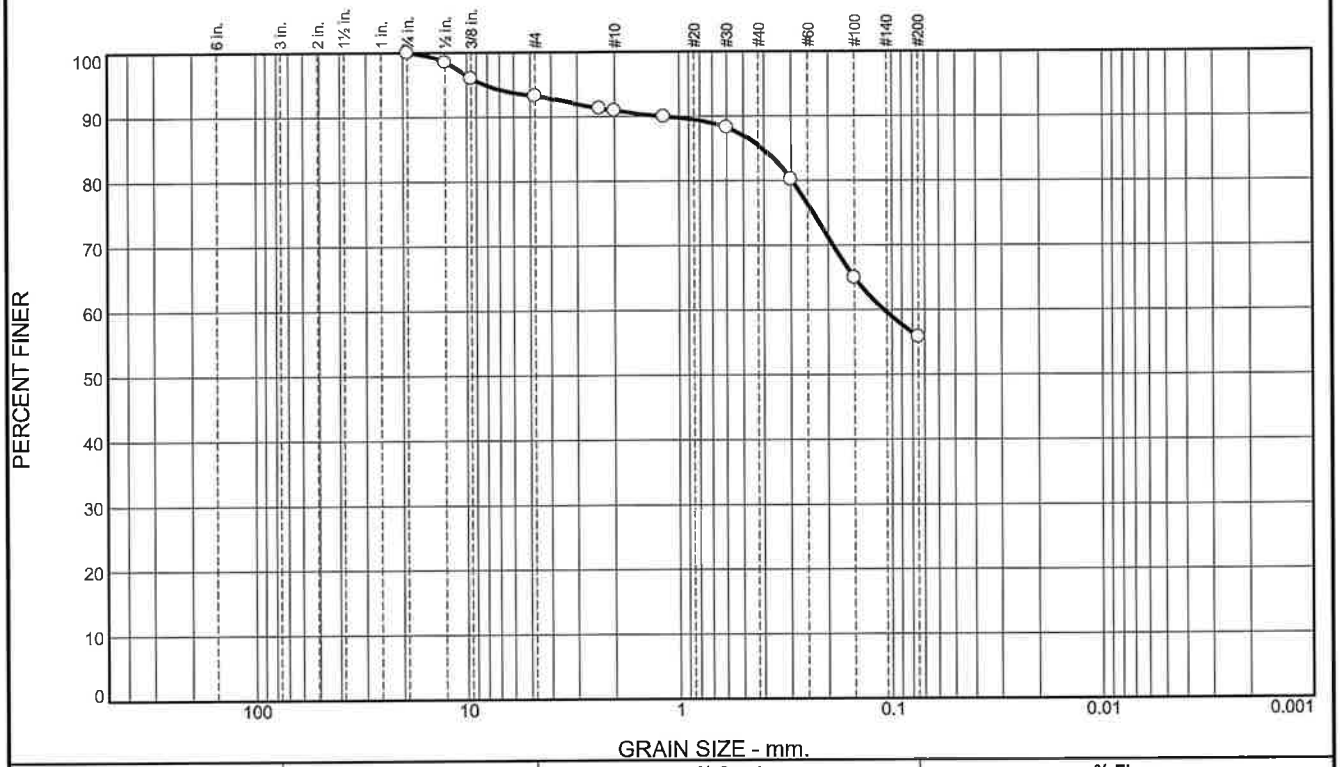
Wood Environment and Infrastructure Solutions, Inc.
Nashville, Tennessee

Client: The Kroger Company
Project: Pick N Save 902

Project No: 242418135

Tested By: NB **Checked By:** MH

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	6.8	2.3	5.5	29.6	55.8	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4"	100.0		
1/2"	98.5		
3/8"	96.0		
#4	93.2		
#8	91.3		
#10	90.9		
#16	89.9		
#30	88.2		
#50	80.2		
#100	65.0		
#200	55.8		

* (no specification provided)

Material Description

sandy silt, gray brown

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 1.2265 D_{85}= 0.4115 D_{60}= 0.1090
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= ML AASHTO= A-4(0)

Remarks

Source of Sample: B-10 **Depth:** 3.5'-5.0'
Sample Number: SS-2

Date: 10/04/18

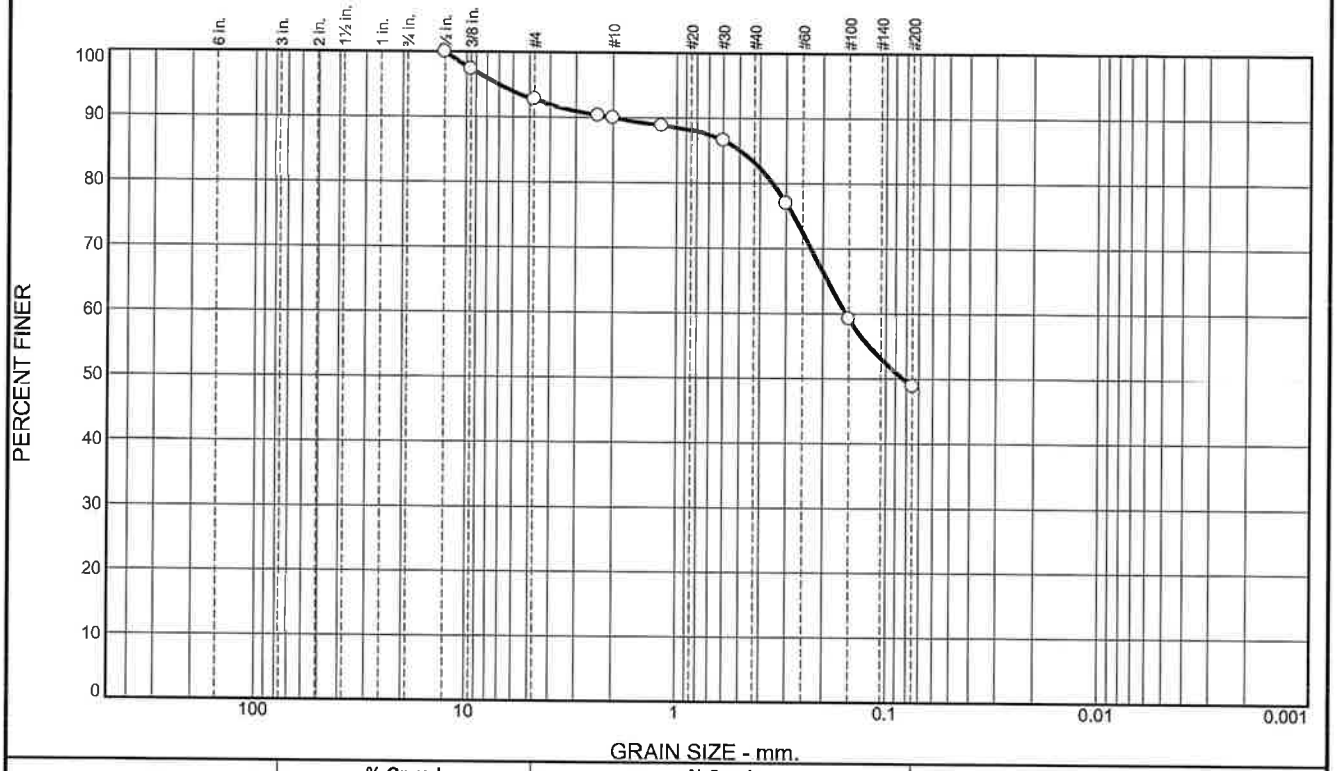
Wood Environment and Infrastructure Solutions, Inc.
Nashville, Tennessee

Client: The Kroger Company
Project: Pick N Save 902

Project No: 242418135

Tested By: NB **Checked By:** MH

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	7.3	2.8	6.7	34.3	48.9	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1/2"	100.0		
3/8"	97.3		
#4	92.7		
#8	90.3		
#10	89.9		
#16	88.8		
#30	86.6		
#50	77.0		
#100	59.2		
#200	48.9		

* (no specification provided)

Material Description

silty, clayey sand, gray brown

Atterberg Limits

PL= 13 LL= 18 PI= 5

Coefficients

D_{90}= 2.0556 D_{85}= 0.4970 D_{60}= 0.1554
D_{50}= 0.0828 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SC-SM AASHTO= A-4(0)

Remarks

Source of Sample: B-11 **Depth:** 13.5'-15.0'
Sample Number: SS-5

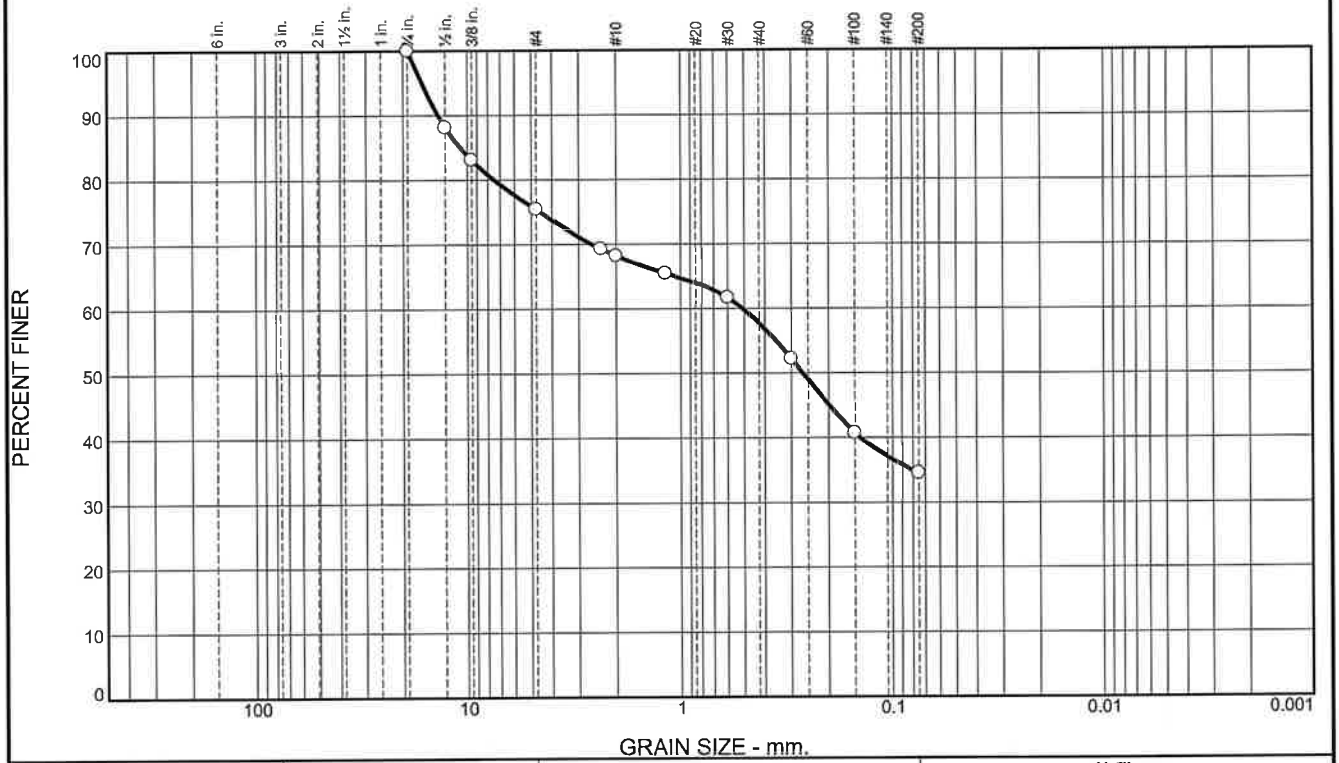
Date: 10/04/18

Wood Environment and Infrastructure Solutions, Inc.
Nashville, Tennessee

Client: The Kroger Company
Project: Pick N Save 902
Project No: 242418135

Tested By: NB **Checked By:** MH

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	24.6	7.2	10.5	23.2	34.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4"	100.0		
1/2"	88.1		
3/8"	83.0		
#4	75.4		
#8	69.3		
#10	68.2		
#16	65.4		
#30	61.7		
#50	52.2		
#100	40.7		
#200	34.5		

* (no specification provided)

Material Description

silty sand with gravel, gray brown

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 13.7271 D_{85}= 10.8438 D_{60}= 0.5095
D_{50}= 0.2649 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SM AASHTO= A-2-4(0)

Remarks

Source of Sample: B-12 **Depth:** 6.0'-7.5'
Sample Number: SS-3

Date: 10/04/18

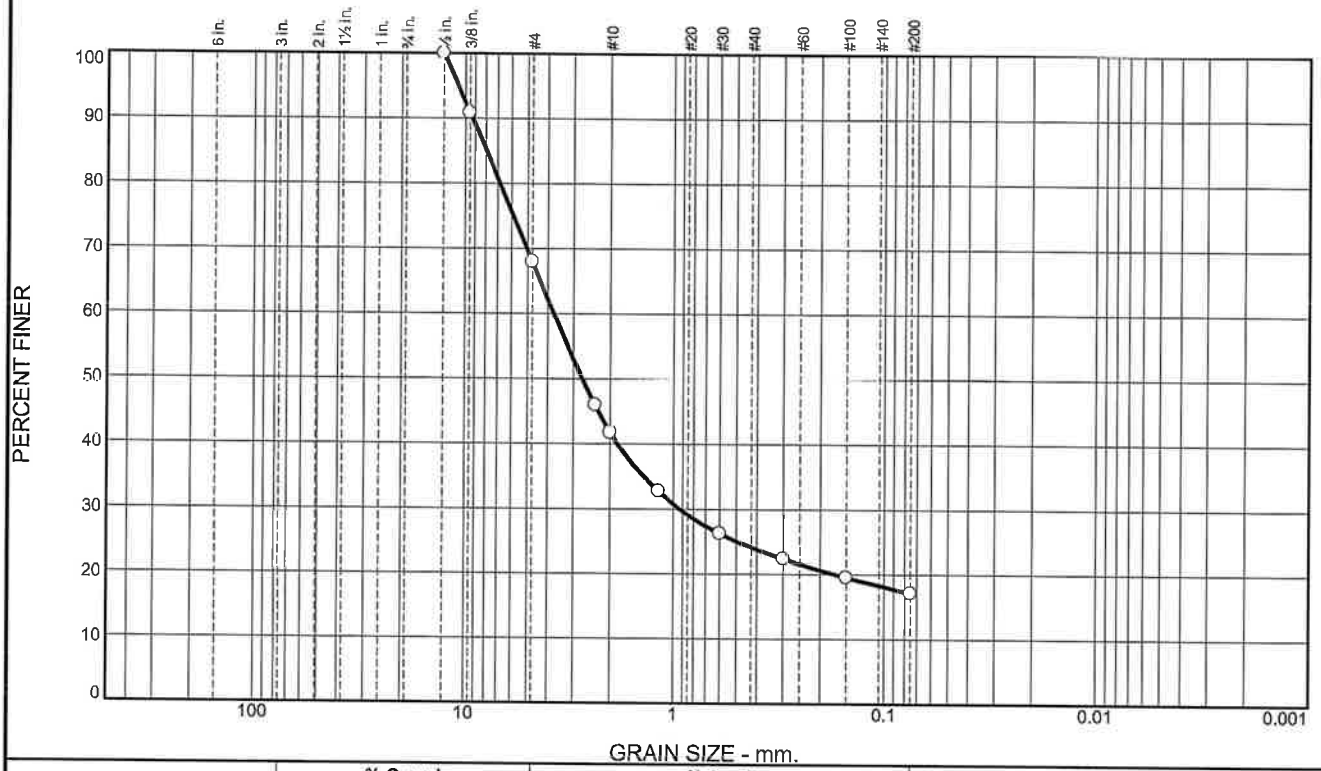
Wood Environment and Infrastructure Solutions, Inc.
Nashville, Tennessee

Client: The Kroger Company
Project: Pick N Save 902

Project No: 242418135

Tested By: NB **Checked By:** MH

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	32.0	26.3	17.6	7.0	17.1	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1/2"	100.0		
3/8"	90.8		
#4	68.0		
#8	45.9		
#10	41.7		
#16	32.7		
#30	26.3		
#50	22.3		
#100	19.5		
#200	17.1		

* (no specification provided)

Material Description

silty sand with gravel, white brown

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 9.2798 D_{85}= 7.9520 D_{60}= 3.7387
D_{50}= 2.7220 D_{30}= 0.9304 D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SM AASHTO= A-1-b

Remarks

Source of Sample: B-13 **Depth:** 1.0'-2.5'
Sample Number: SS-1

Date: 10/04/18

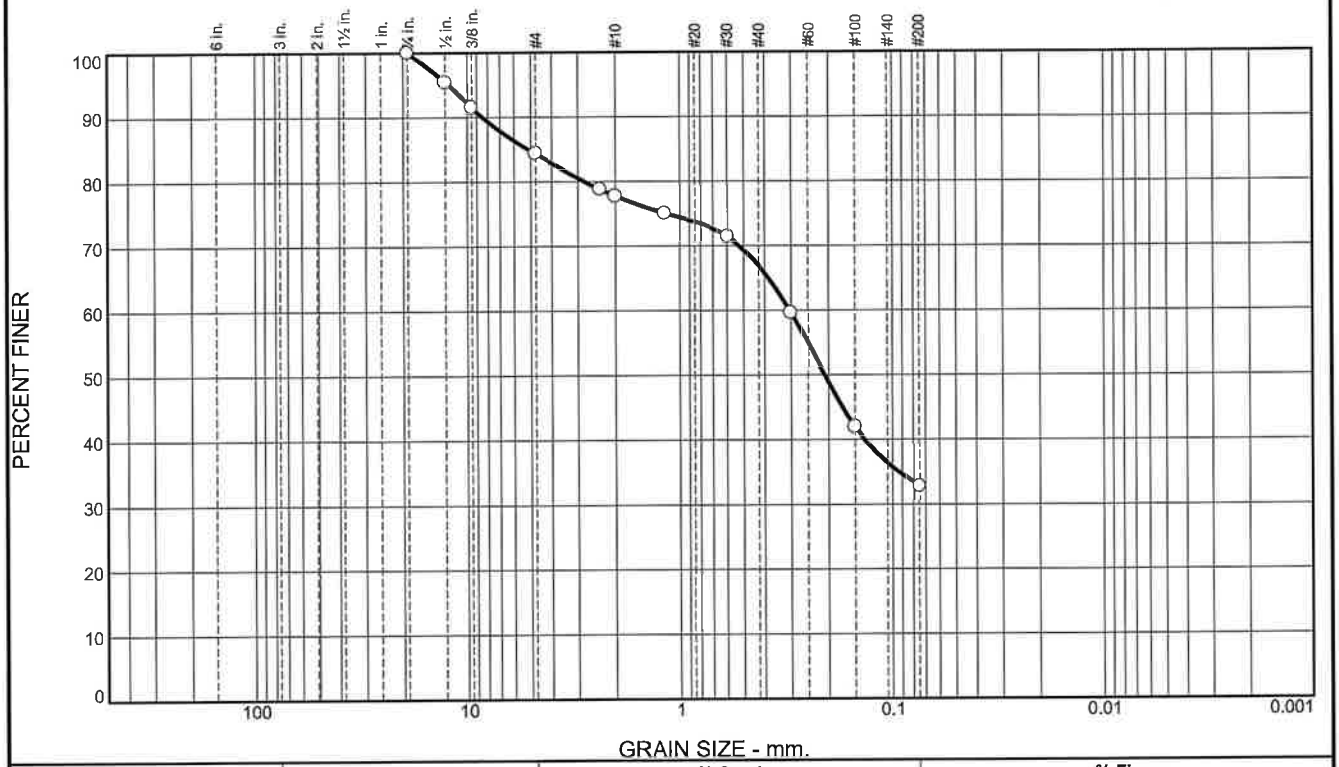
Wood Environment and Infrastructure Solutions, Inc.
Nashville, Tennessee

Client: The Kroger Company
Project: Pick N Save 902

Project No: 242418135

Tested By: NB **Checked By:** MH

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	15.7	6.6	10.9	34.0	32.8	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4"	100.0		
1/2"	95.4		
3/8"	91.5		
#4	84.3		
#8	78.8		
#10	77.7		
#16	75.0		
#30	71.4		
#50	59.6		
#100	41.9		
#200	32.8		

* (no specification provided)

Material Description

silty sand with gravel, gray brown

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 8.4812 D_{85}= 5.1621 D_{60}= 0.3048
D_{50}= 0.2089 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SM AASHTO= A-2-4(0)

Remarks

Source of Sample: B-19 **Depth:** 1.0'-2.5'
Sample Number: SS-1

Date: 10/04/18

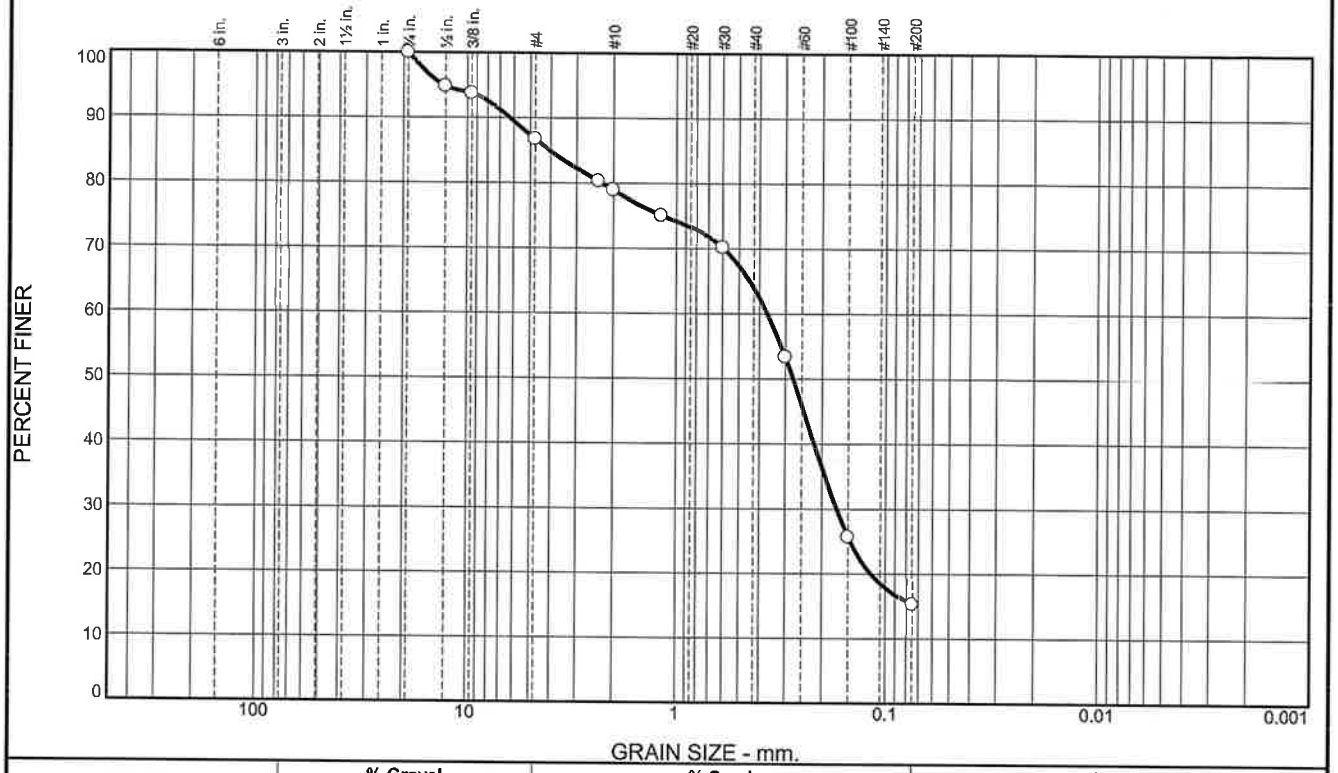
Wood Environment and Infrastructure Solutions, Inc.
Nashville, Tennessee

Client: The Kroger Company
Project: Pick N Save 902

Project No: 242418135

Tested By: NB **Checked By:** MH

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	13.3	7.8	14.9	48.7	15.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4"	100.0		
1/2"	94.8		
3/8"	93.7		
#4	86.7		
#8	80.3		
#10	78.9		
#16	75.1		
#30	70.2		
#50	53.4		
#100	25.7		
#200	15.3		

* (no specification provided)

Material Description

silty sand, tan brown

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 6.2669 D_{85}= 4.0496 D_{60}= 0.3662
D_{50}= 0.2754 D_{30}= 0.1705 D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SM AASHTO= A-2-4(0)

Remarks

Source of Sample: B-20 **Depth:** 38.5'-40.0'
Sample Number: SS-9

Date: 10/04/18

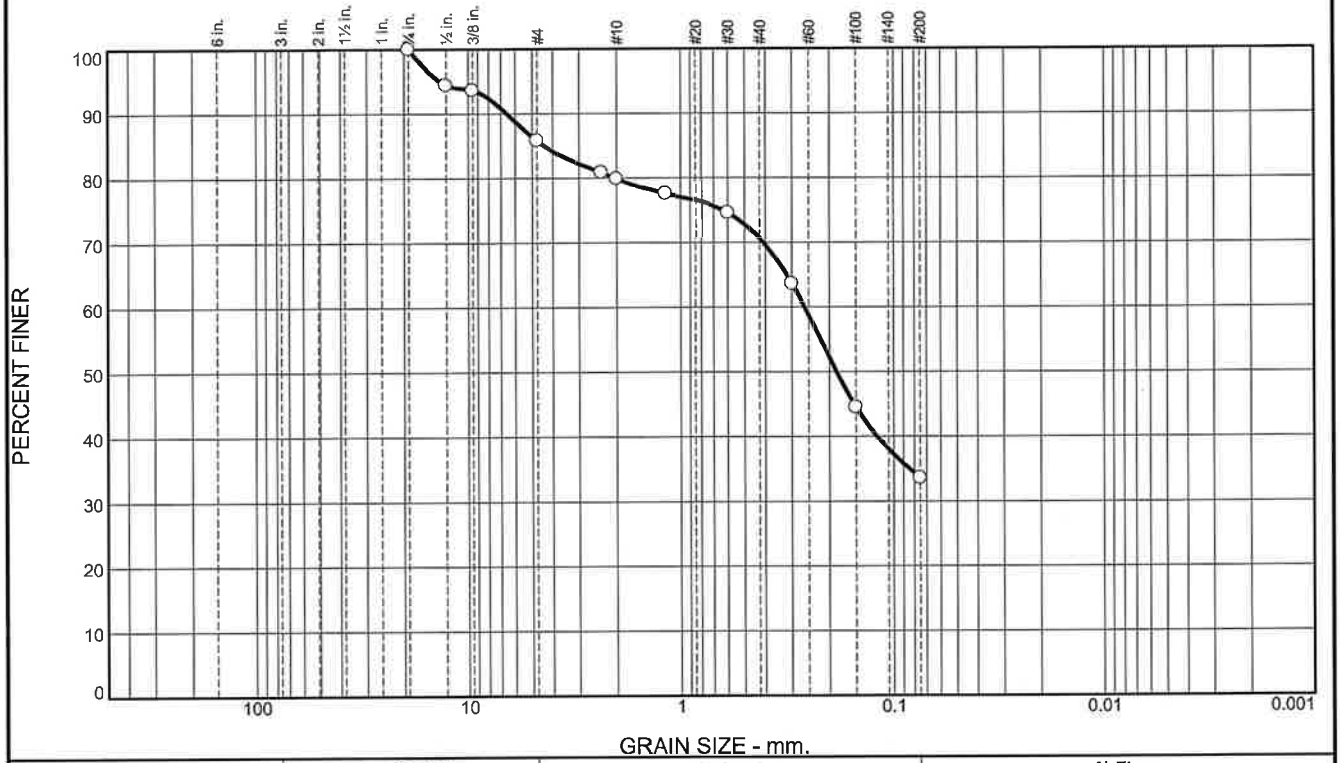
Wood Environment and Infrastructure Solutions, Inc.
Nashville, Tennessee

Client: The Kroger Company
Project: Pick N Save 902

Project No: 242418135

Tested By: NB **Checked By:** MH

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	14.2	6.0	9.2	37.1	33.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4"	100.0		
1/2"	94.4		
3/8"	93.6		
#4	85.8		
#8	80.8		
#10	79.8		
#16	77.5		
#30	74.6		
#50	63.6		
#100	44.5		
#200	33.5		

* (no specification provided)

Material Description

silty sand, gray brown

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 6.5503 D_{85}= 4.4181 D_{60}= 0.2617
D_{50}= 0.1852 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SM AASHTO= A-2-4(0)

Remarks

Source of Sample: B-21 **Depth:** 3.5'-5.0'
Sample Number: SS-2

Date: 10/04/18

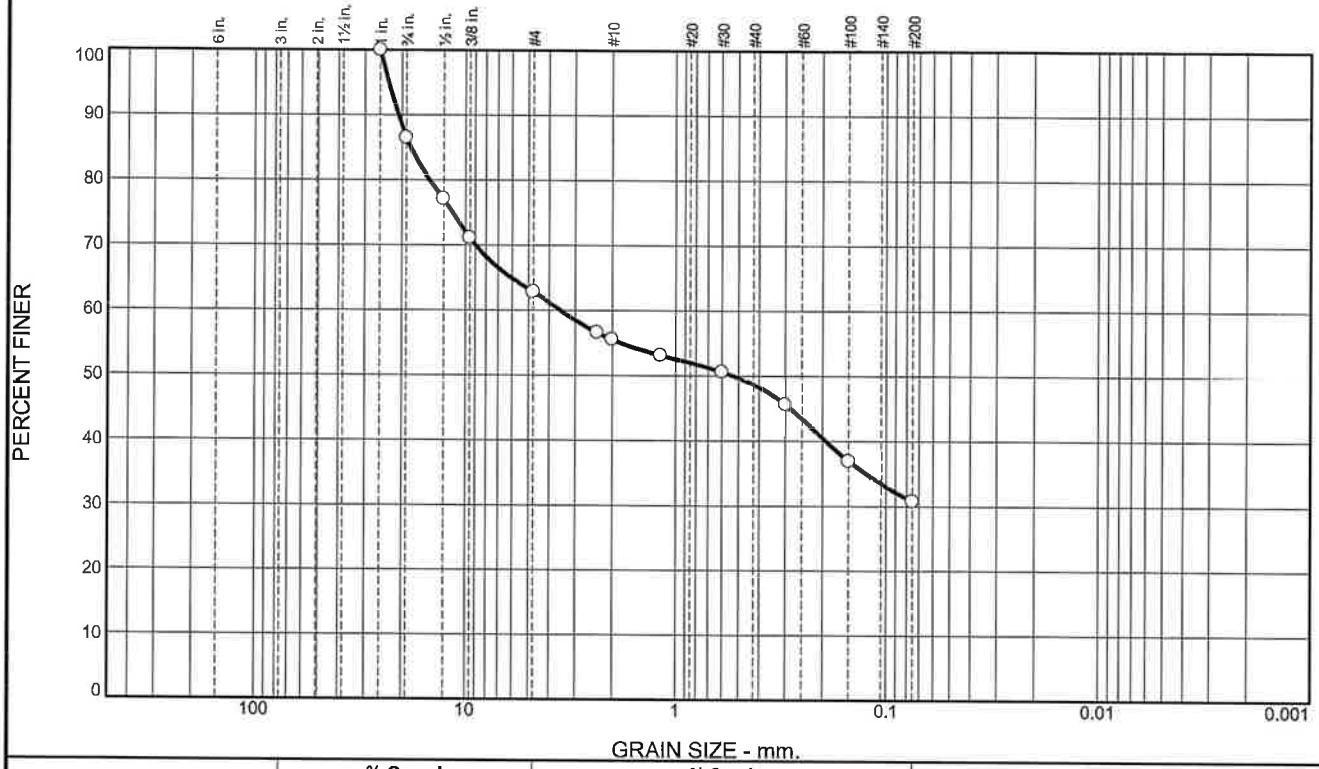
Wood Environment and Infrastructure Solutions, Inc.
Nashville, Tennessee

Client: The Kroger Company
Project: Pick N Save 902

Project No: 242418135

Tested By: NB **Checked By:** MH

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	13.5	23.7	7.3	6.9	17.8	30.8	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1"	100.0		
3/4"	86.5		
1/2"	77.0		
3/8"	71.1		
#4	62.8		
#8	56.6		
#10	55.5		
#16	53.1		
#30	50.6		
#50	45.6		
#100	36.9		
#200	30.8		

* (no specification provided)

Material Description

silty clayey gravel with sand, brown

Atterberg Limits

PL= 14 LL= 19 PI= 5

Coefficients

D_{90}= 20.7766 D_{85}= 18.2471 D_{60}= 3.5294
D_{50}= 0.5315 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= GC-GM AASHTO= A-2-4(0)

Remarks

Source of Sample: B-24 **Depth:** 28.5'-30.0'
Sample Number: SS-8

Date: 10/04/18

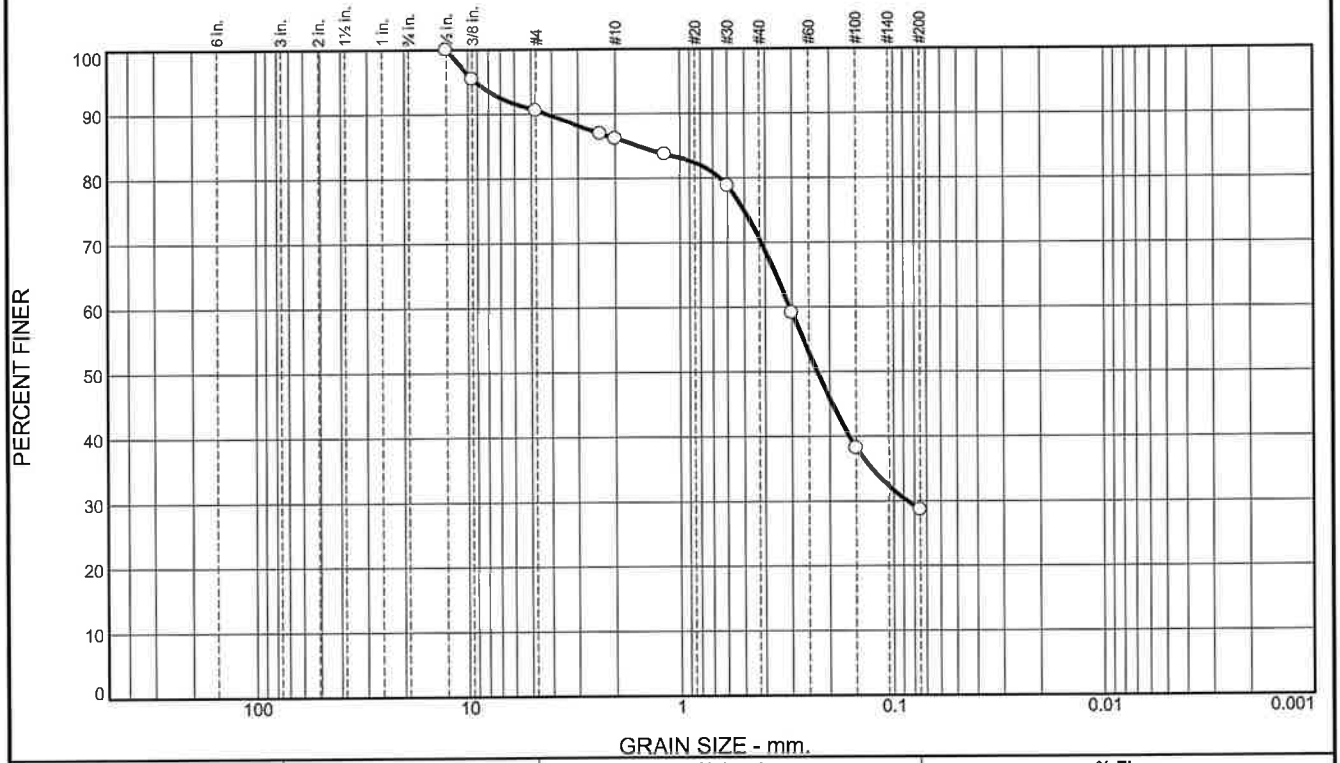
Wood Environment and Infrastructure Solutions, Inc.
Nashville, Tennessee

Client: The Kroger Company
Project: Pick N Save 902

Project No: 242418135

Tested By: NB **Checked By:** MH

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	9.5	4.4	15.6	41.9	28.6	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1/2"	100.0		
3/8"	95.5		
#4	90.5		
#8	86.9		
#10	86.1		
#16	83.6		
#30	78.8		
#50	59.1		
#100	38.2		
#200	28.6		

* (no specification provided)

Material Description

silty sand, gray brown

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 4.2474 D_{85}= 1.6023 D_{60}= 0.3078
D_{50}= 0.2287 D_{30}= 0.0863 D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SM AASHTO= A-2-4(0)

Remarks

Source of Sample: B-26 **Depth:** 3.5'-5.0'
Sample Number: SS-2

Date: 10/04/18

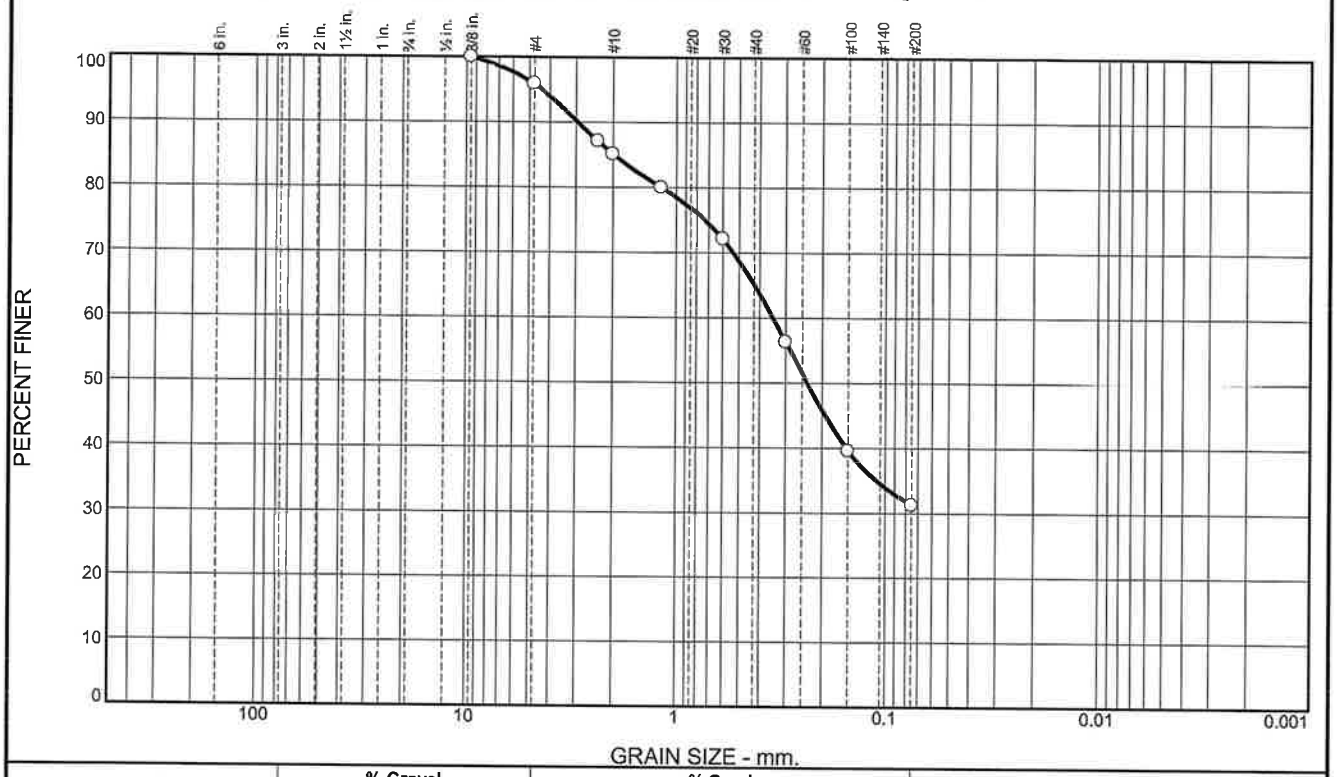
Wood Environment and Infrastructure Solutions, Inc.
Nashville, Tennessee

Client: The Kroger Company
Project: Pick N Save 902

Project No: 242418135

Tested By: NB **Checked By:** MH

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	4.2	10.7	20.0	33.9	31.2	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/8"	100.0		
#4	95.8		
#8	87.1		
#10	85.1		
#16	80.0		
#30	72.1		
#50	56.3		
#100	39.6		
#200	31.2		

* (no specification provided)

Material Description

silty sand, tan brown

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 2.9439 D_{85}= 1.9851 D_{60}= 0.3457
D_{50}= 0.2363 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SM AASHTO= A-2-4(0)

Remarks

Source of Sample: B-29/B-30 **Depth:** 1.0'-15.0'
Sample Number: Bulk

Date: 9/28/18

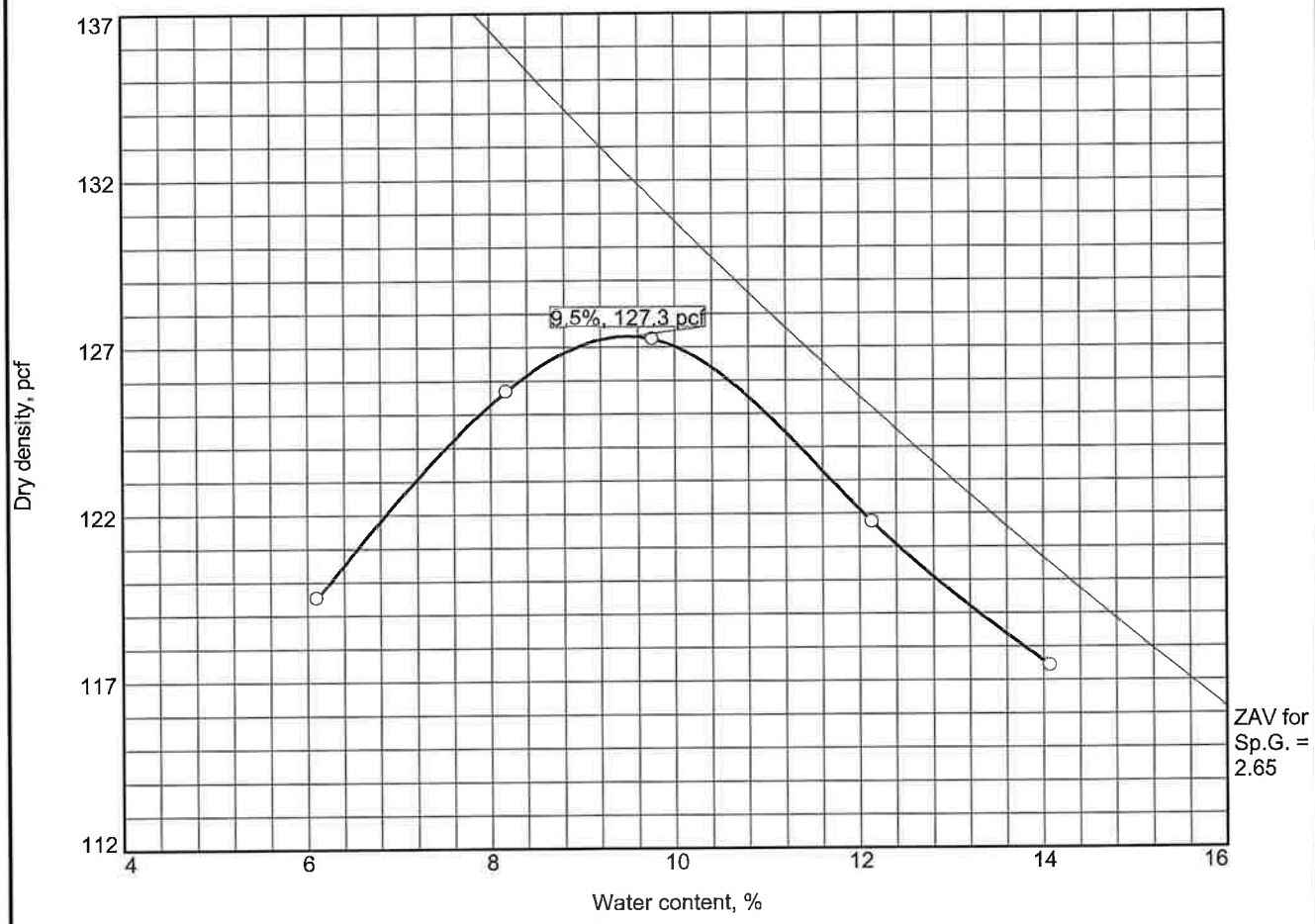
Wood Environment and Infrastructure Solutions, Inc.
Nashville, Tennessee

Client: The Kroger Company
Project: Pick N Save 902

Project No: 242418135

Tested By: KM **Checked By:** MH

COMPACTION TEST REPORT



Test specification: ASTM D 698-12 Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
1.0'-15.0'	SM	A-2-4(0)			NV	NP	4.2	31.2

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 127.3 pcf Optimum moisture = 9.5 %	silty sand, tan brown

Project No. 242418135 **Client:** The Kroger Company
Project: Pick N Save 902

○ **Source of Sample:** B-29/B-30 **Sample Number:** Bulk

Remarks:

Wood Environment and Infrastructure Solutions, Inc.
Nashville, Tennessee

Tested By: KM **Checked By:** MH

pH & Resistivity of Soils

ASTM D4972 & ASTM G57

CLIENT: Kroger Company **PROJECT NO.:** 2424-18-135

PROJECT NAME: Pick n Save 902 **DATE:** September 26, 2018

Reviewed By: **Tested By:** KM/MH

Boring B-29 & B-30 **Sample Type** Bulk **Depth** 1.0'-15.0'

Description silty sand

Color tan brown

pH of Soil

Preperation Method

Seived through #10: YES X NO

Removal of gravel or other materials from original sample: YES NO X

Test Method

Method A (pH Meter) X Method B (pH Paper)

Container ID: 91

Sample Temperature: 21.6

pH Value 9.19

Resistivity of Soil

Resistivity Meter Make & Model DUOYI DY4300 Soil Box Factor 1

Container ID: SB-1

Sample Temperature: 22.0

Resistivity (ohms/cm) 1580

Remarks

Wood
Environemental and Infrastructure Solutions, Inc.
5211 Linbar Drive, Suite 513
Nashville, TN USA 37211

Office:615.333.0630
Lab: 615.831.9202
www.woodplc.com

wood.

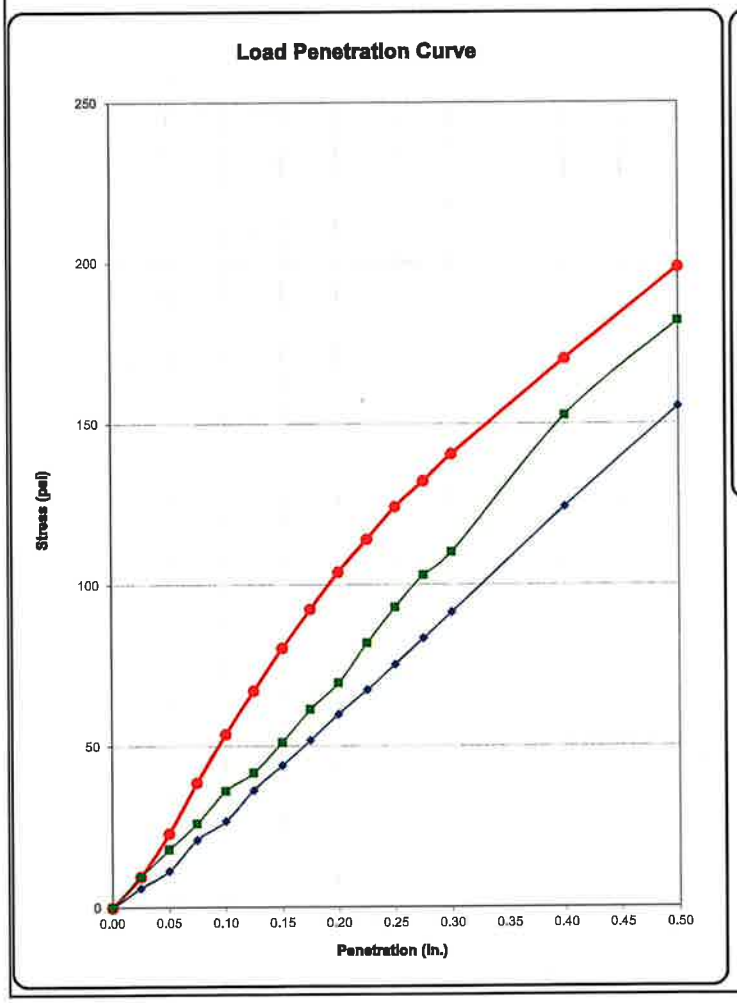
WOOD
ENVIRONMENT AND INFRASTRUCTURE SOLUTIONS, INC.
NASHVILLE, TN

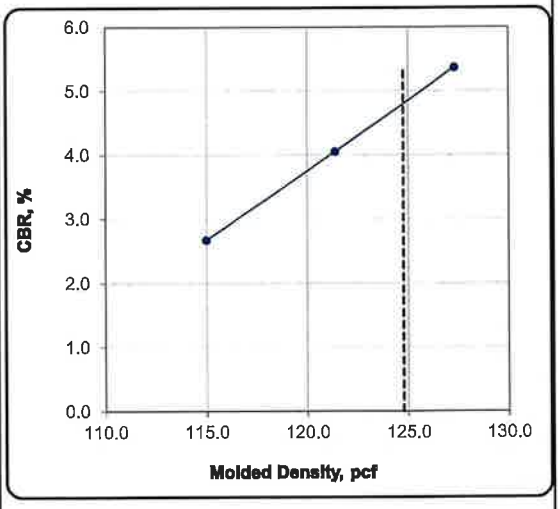
ASTM D1883 - STANDARD METHOD FOR CBR (CALIFORNIA BEARING RATIO) OF LABORATORY-COMPACTED SOILS

Project Name:	Kroger Pick N Save 902		**Date of Preparation:**	October 4, 2018	
Project Number:	242418135		**Date of Test:**	10/5-10/8/18	
Reviewed By:			**Tested By:**	M. Haley	
Sample ID: **Boring**	B-29 & B-30	**Sample:**	Bulk	**Depth**	1.0'-15.0'
Remarks:	Specimens compacted to approximately 90%, 95%, and 100% of the maximum density near the optimum moisture content.				

Specimen / Mark	PRE-TEST			POST-TEST			CBR, (%)		Line	Penetration	Swell
	Density	% max	Moist. (%)	Density	% max	Moist. (%)	0.1"	0.2"	corr.	Surcharge	(%)
1 ◆	115.0	90.3	9.7	113.4	89.1	11.2%	2.7	4.0	0.000	10.0	0.00
2 ■	121.4	95.4	9.9	120.9	95.0	10.4%	4.1	5.3	0.020	10.0	-0.01
3 ●	127.3	100.0	9.5	126.9	99.7	9.9%	5.4	6.9	0.000	10.0	-0.01

MATERIAL DESCRIPTION	USCS	MAX.DENS.	OPT. M%	LL	PI
sandy silt, tan brown	SM	127.3	9.5	NV	NP





CBR @ 98.0% = 4.8
for 0.1 in. penetration

ATTERBERG LIMITS

ASTM D 4318-17

Client:	Wood PLC	Boring No.:	B-20
Client Reference:	2424-18-135 (PS-902)	Depth (ft):	8.5-10.5
Project No.:	N2018-028-001	Sample No.:	ST-1
Lab ID:	N2018-028-001-001	Soil Description:	DARK BROWN LEAN CLAY

Note: The USCS symbol used with this test refers only to the minus No. 40 sieve material. See the "Sieve and Hydrometer Analysis" graph page for the complete material description.

(Minus No. 40 sieve material, Air dried)

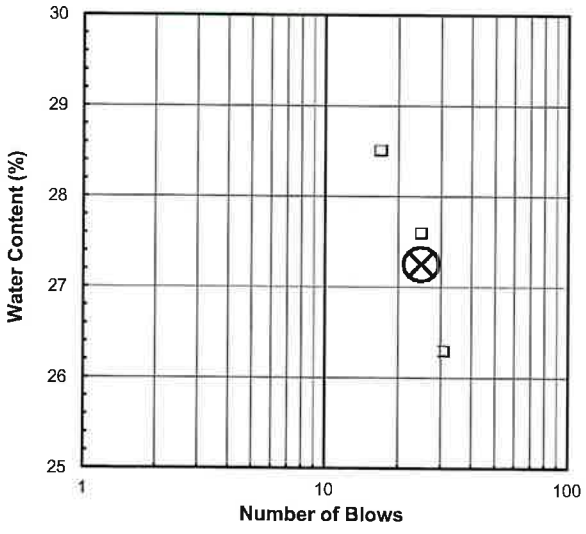
As Received Moisture Content ASTM D2216-10		Liquid Limit Test 1	2	3	MULTIPOINT
Tare Number:	T19	13	36	16	
Wt. of Tare & Wet Sample (g):	305.19	48.10	43.73	42.40	
Wt. of Tare & Dry Sample (g):	266.50	42.11	38.32	37.11	
Weight of Tare (g):	8.36	19.33	18.72	18.55	
Weight of Water (g):	38.7	6.0	5.4	5.3	
Weight of Dry Sample (g):	258.1	22.8	19.6	18.6	
Was As Received MC Preserved:	**Yes**				
Moisture Content (%):	**15.0**	**26.3**	**27.6**	**28.5**	
Number of Blows:		**31**	**25**	**17**	

Plastic Limit Test	1	2	Range
Tare Number:	7	48	
Wt. of Tare & Wet Sample (g):	25.11	25.15	
Wt. of Tare & Dry Sample (g):	24.25	24.30	
Weight of Tare (g):	18.94	19.03	
Weight of Water (g):	0.9	0.8	
Weight of Dry Sample (g):	5.3	5.3	
Moisture Content (%):	**16.2**	**16.1**	**0.1**

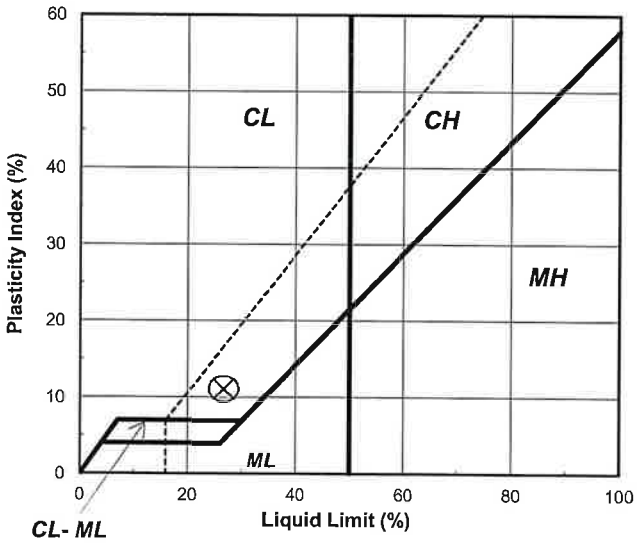
Note: The acceptable range of the two Moisture Contents is ± 1.12

Test Results	
Liquid Limit (%):	**27**
Plastic Limit (%):	**16**
Plasticity Index (%):	**11**
USCS Symbol:	**CL**

Flow Curve



Plasticity Chart



Tested By RT *Date* 10/3/18 *Checked By* WDS *Date* 10/4/18

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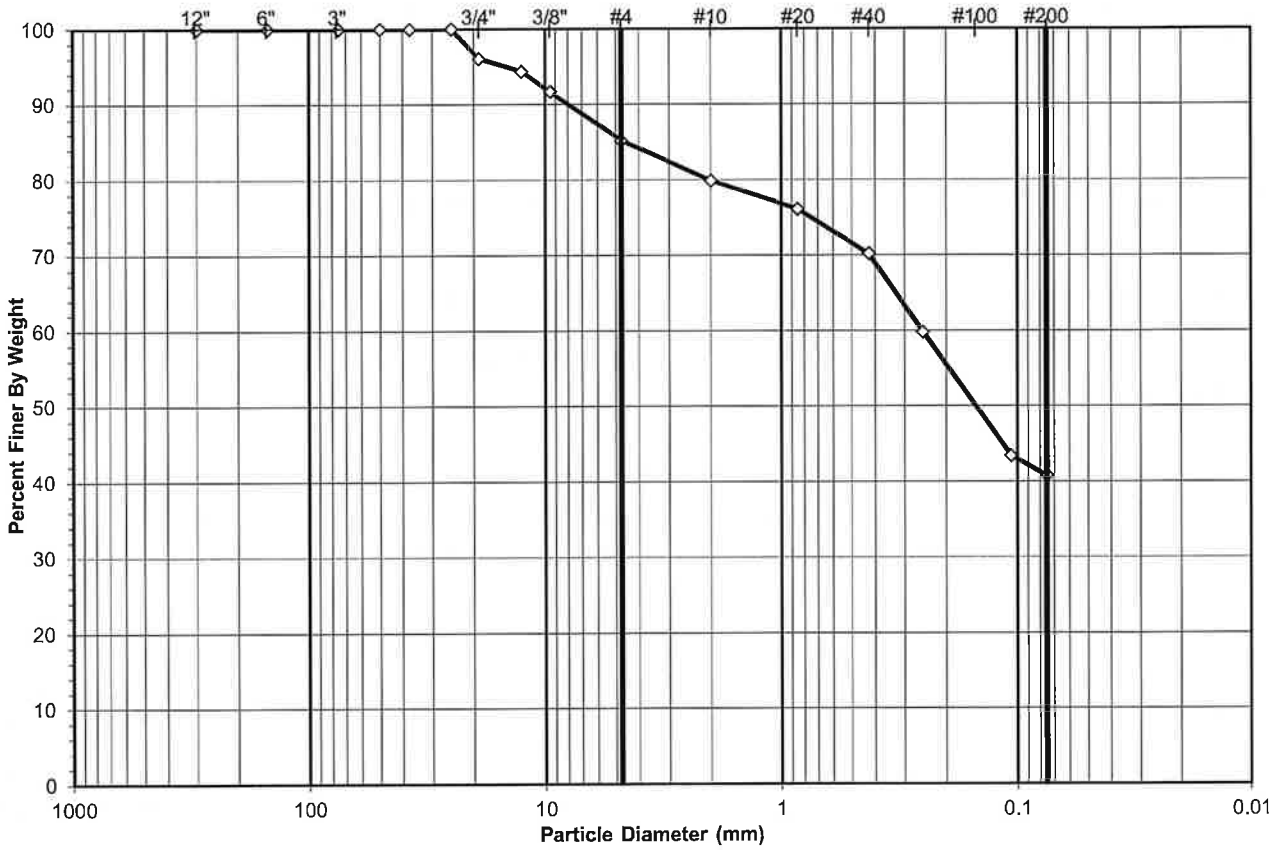
SIEVE ANALYSIS

ASTM D 422-63 (2007)

Client:	Wood PLC	Boring No.:	B-20
Client Reference:	2424-18-135 (PS-902)	Depth (ft):	8.5-10.5
Project No.:	N2018-028-001	Sample No.:	ST-1
Lab ID:	N2018-028-001-001	Soil Color:	Dark Brown

	SIEVE ANALYSIS			HYDROMETER	
USCS	cobbles	gravel	sand	silt and clay fraction	
USDA	cobbles	gravel	sand	silt	clay



USCS Summary		
Sieve Sizes (mm)		**Percentage**
Greater Than #4	*Gravel*	14.84
#4 To #200	*Sand*	44.46
Finer Than #200	*Silt & Clay*	40.70

USCS Symbol:
SC, TESTED

USCS Classification:
CLAYEY SAND

DCN: CT-S3B, DATE: 7/17/17, REVISION: 9e

S:Excel\Excel QA\Spreadsheets\SieveHydJ.xls

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WASH SIEVE ANALYSIS

ASTM D 422-63 (2007)

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Client:	Wood PLC	Boring No.:	B-20
Client Reference:	2424-18-135 (PS-902)	Depth (ft):	8.5-10.5
Project No.:	N2018-028-001	Sample No.:	ST-1
Lab ID:	N2018-028-001-001	Soil Color:	Dark Brown

Moisture Content of Passing 3/4" Material		Moisture Content of Retained 3/4" Material	
Tare No.:	55	Tare No.:	NA
Wt. of Tare & Wet Sample (g):	1588.84	Weight of Tare & Wet Sample (g):	NA
Wt. of Tare & Dry Sample (g):	1464.08	Weight of Tare & Dry Sample (g):	NA
Weight of Tare (g):	203.61	Weight of Tare (g):	NA
Weight of Water (g):	124.76	Weight of Water (g):	NA
Weight of Dry Soil (g):	1260.47	Weight of Dry Soil (g):	NA
Moisture Content (%):	**9.9**	**Moisture Content (%):**	**0.0**

Wet Weight of -3/4" Sample (g):	NA	Weight of the Dry Sample (g):	1260.47
Dry Weight of - 3/4" Sample (g):	1260.5	Weight of Minus #200 Material (g):	534.29
Wet Weight of +3/4" Sample (g):	52.19	Weight of Plus #200 Material (g):	726.18
Dry Weight of + 3/4" Sample (g):	52.19		
Total Dry Weight of Sample (g):	1312.7		

Sieve Size	Sieve Opening (mm)	Weight of Soil Retained (g)		Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00		0.00	0.00	100.00	**100.00**
6"	150	0.00		0.00	0.00	100.00	**100.00**
3"	75	0.00		0.00	0.00	100.00	**100.00**
2"	50	0.00	(*)	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00		0.00	0.00	100.00	**100.00**
1"	25.0	0.00		0.00	0.00	100.00	**100.00**
3/4"	19.0	52.19		3.98	3.98	96.02	**96.02**
1/2"	12.5	22.80		1.81	1.81	98.19	**94.29**
3/8"	9.50	34.49		2.74	4.55	95.45	**91.66**
#4	4.75	85.34		6.77	11.32	88.68	**85.16**
#10	2.00	69.32		5.50	16.82	83.18	**79.88**
#20	0.85	49.88	(**)	3.96	20.77	79.23	**76.08**
#40	0.425	77.40		6.14	26.91	73.09	**70.18**
#60	0.250	136.52		10.83	37.74	62.26	**59.78**
#140	0.106	215.60		17.10	54.85	45.15	**43.36**
#200	0.075	34.83		2.76	57.61	42.39	**40.70**
Pan	-	534.29		42.39	100.00	-	-

Notes : *(*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample*
*(**) The - 3/4" sieve analysis is based on the Weight of the Dry Sample*

Tested By NC Date 10/7/2018 Checked By WDS Date 10/8/2018

DCN: CT-S3B, DATE: 7/17/17, REVISION: 9e

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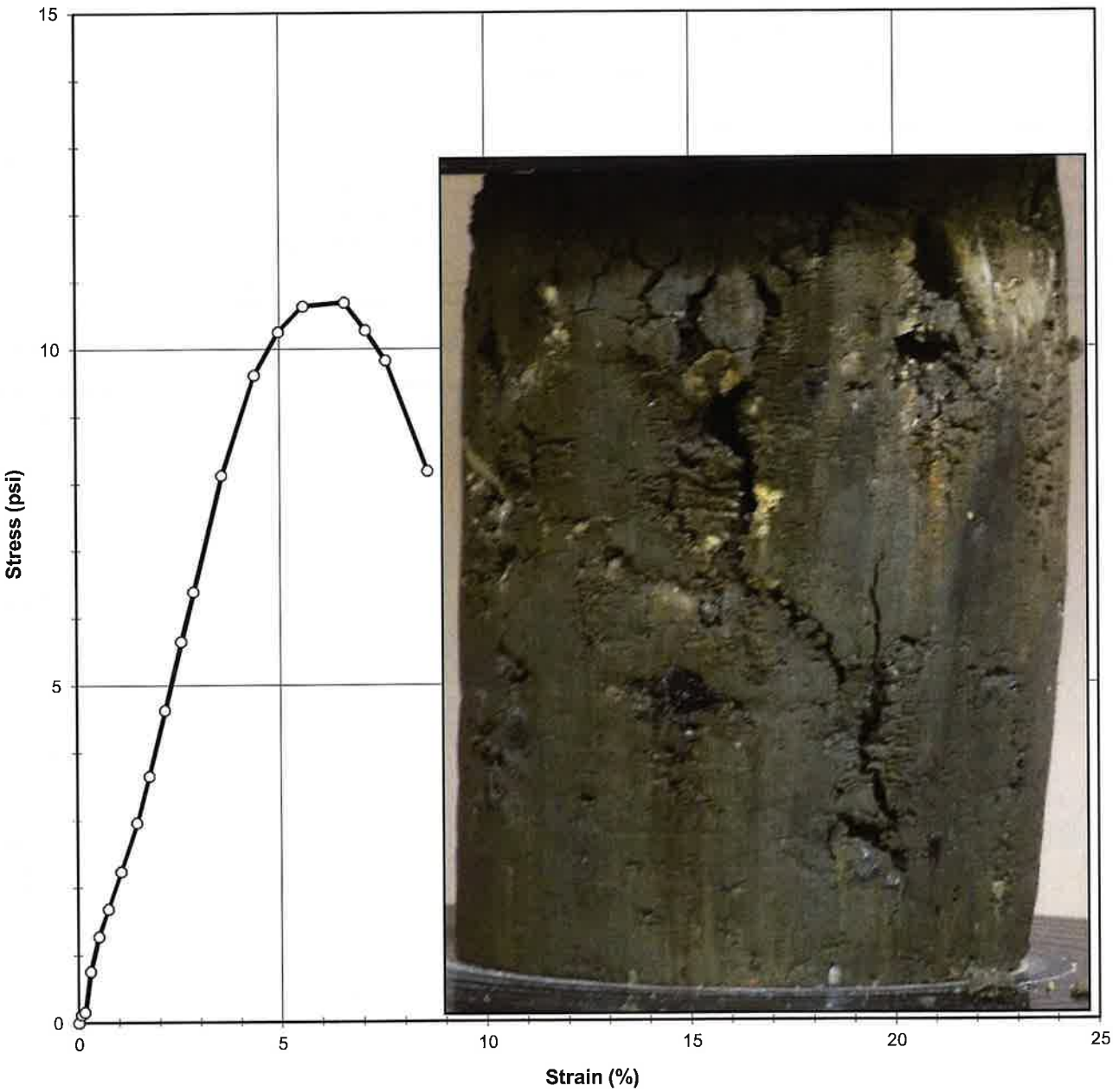
UNCONFINED COMPRESSIVE STRENGTH

ASTM D2166-16 / AASHTO T208-15 (SOP S-30)

Client:	Wood PLC	Boring No.:	B-20
Client Reference:	2424-18-135 (PS-902)	Depth (ft):	9.1-9.5
Project No.:	N2018-028-001	Sample No.:	ST-1
Lab ID:	N2018-028-001-001	Visual:	DARK BROWN CLAYEY SAND



Tested By NC Date 10/1/2018 Approved By WDS Date 10/2/2018

DCN: CT-S30 Date: 11/09/09 Revision: 4

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UNCONFINED COMPRESSIVE STRENGTH

ASTM D2166-16 / AASHTO T208-15 (SOP S-30)

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Client:	Wood PLC	Boring No.:	B-20
Client Reference:	2424-18-135 (PS-902)	Depth (ft):	9.1-9.5
Project No.:	N2018-028-001	Sample No.:	ST-1
Lab ID:	N2018-028-001-001	Visual:	DARK BROWN CLAYEY SAND

INITIAL SAMPLE DIMENSIONS

Length 1 (in):	4.709	Top Diameter (in):	2.867
Length 2 (in):	4.684	Middle Diameter (in):	2.861
Length 3 (in):	4.714	Bottom Diameter (in):	2.845
Avg. Length (in):	**4.702**	**Avg. Diameter (in):**	**2.858**
		Area (in^2):	**6.414**

WATER CONTENT AFTER TEST

Tare No.:	26
Weight of Tare & Wet Sample (g):	105.29
Weight of Tare & Dry Sample (g):	92.50
Weight of Tare (g):	6.42
Moisture Content (%):	14.86

UNIT WEIGHT

Weight of Tube & Wet Sample (g):	1053.14	Sample Volume (cm^3):	494.2
Weight of Tube (g):	0.0	Unit Wet Weight (g/cm^3):	2.13
Weight of Wet Sample (g):	1053.14	Unit Wet Weight (pcf):	132.97
Average Diameter (in):	2.86	Moisture Content (%):	14.86
Average Length (in):	4.70	Unit Dry Weight (pcf):	115.77
Average Length (cm):	11.94		

ELECTRONIC DEVICE DEFORMATION (in)	*LOAD (lb)*	*ELAPSED TIME (min)*	*STRAIN (%)*	*STRESS (psi)*
0.000	0.3	0.00	0.000	0.000
0.003	1.1	0.08	0.070	0.115
0.007	1.3	0.15	0.156	0.153
0.014	5.2	0.28	0.290	0.758
0.023	8.6	0.48	0.500	1.274
0.035	11.2	0.70	0.738	1.684
0.050	14.8	1.00	1.053	2.235
0.068	19.6	1.38	1.453	2.961
0.083	24.2	1.67	1.759	3.650
0.102	30.7	2.05	2.159	4.628
0.120	37.5	2.43	2.560	5.649
0.135	42.5	2.72	2.866	6.389
0.168	54.3	3.38	3.573	8.118
0.206	64.8	4.15	4.375	9.608
0.234	69.5	4.72	4.977	10.251
0.262	72.6	5.28	5.578	10.631
0.310	73.7	6.23	6.589	10.691
0.334	71.3	6.72	7.104	10.273
0.357	68.5	7.17	7.590	9.817
0.404	57.7	8.12	8.591	8.179

Notes: Sample tested less than 2:1 ratio due to large stone causing void in shelby tube.

Tested By NC Date 10/1/2018 Input Checked By WDS Date 10/2/2018

DCN: CT-S30 Date: 11/09/09 Revision: 4

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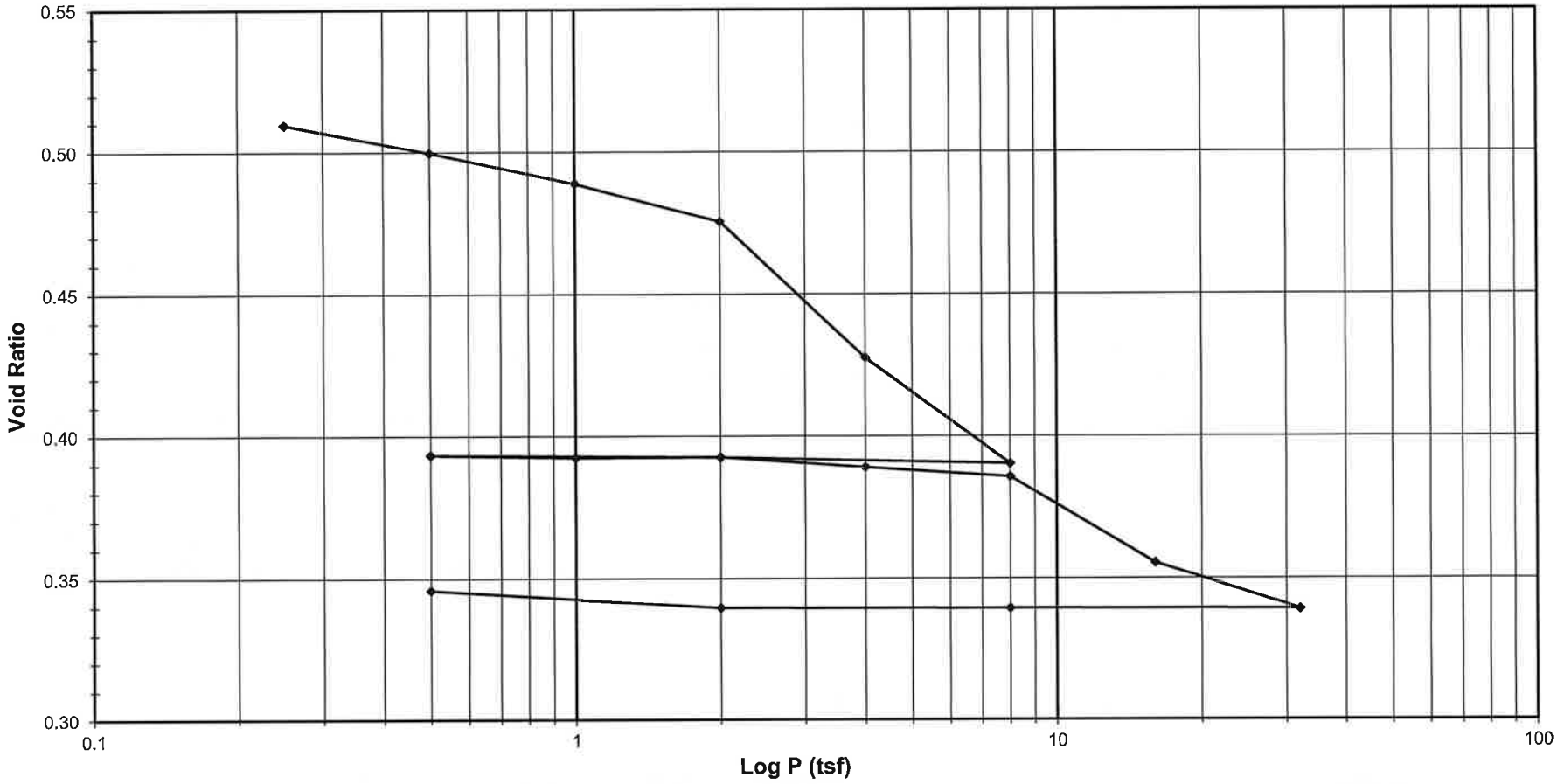
ONE DIMENSIONAL CONSOLIDATION

ASTM D 2435-11

Client	Wood PLC	Boring No.	B-20
Client Reference	2424-18-135 (PS-902)	Depth (ft)	8.5-10.5
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-001	Visual Description	DARK BROWN CLAYEY SAND

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED



Tested By NC *Date* 10/1/2018 *Approved By* DS *Date* 10/16/2018

DCN: CT-S24F Date: 12/12/05 Revision: 5

C:\Users\TenLab#02\Desktop\Projects Folder\Nashville Projects\2018\N2018-028 - WOOD - PS-902\001\[N2018-028-001-001 D2435.xlsm]FINAL PLOT

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ONE DIMENSIONAL CONSOLIDATION

ASTM D 2435-11

Client	Wood PLC	Boring No.	B-20
Client Reference	2424-18-135 (PS-902)	Depth (ft)	8.5-10.5
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-001	Visual Description	DARK BROWN CLAYEY SAND

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED
Consolidometer No. N144
1 Division = 0.0001 (in.)

Sample Properties	**Initial**	**Final**
Water Content		
Tare Number	T19	5
Wt. Tare & WS (g)	305.19	251.97
Wt. Tare & DS (g)	266.50	233.40
Wt. Water (g)	38.69	18.57
Wt. Tare (g)	8.36	88.40
Wt. DS (g)	258.14	145.00
Water Content (%)	14.99	12.81
Sample Parameters		
Sample Diameter (in)	2.5	2.5
Sample Height (in)	1.0000	0.8866
Sample Volume (cc)	80.44	71.32
Wt. Wet Sample + Ring (g)	379.61	376.49
Wt. of Ring (g)	215.10	215.10
Wt. of Wet Sample (g)	164.51	161.39
Wet Density (pcf)	127.62	141.21
Wet Density (g/cc)	2.05	2.26
Water Content (%)	14.99	12.81
Wt. of Dry Sample (g)	143.07	143.07
Dry Density (pcf)	110.98	125.18
Dry Density (g/cc)	1.78	2.01
Void Ratio	0.5181	0.3459
Saturation (%)	78.11	99.97
Specific Gravity	2.70	*Assumed*

Test Data Summary

Applied Pressure (tsf)	Final Dial Reading (div)	Machine Deflection (div)	Corrected Reading (div)	Height of Sample (mm)	Volume (cc)	Dry Density (g/cc)	Void Ratio
Seating	0	0	0	25.400	80.440	1.77856	**0.51808**
0.25	79.1	22.8	56.3	25.257	79.987	1.78864	**0.50953**
0.5	152.0	31.3	120.7	25.093	79.469	1.80029	**0.49976**
1	246.2	53.3	192.9	24.910	78.888	1.81355	**0.48880**
2	361.2	79.9	281.3	24.686	78.177	1.83004	**0.47538**
4	708.6	112.6	596.0	23.886	75.646	1.89128	**0.42760**
8	993.7	152.6	841.0	23.264	73.674	1.94188	**0.39040**
2	933.6	107.2	826.4	23.301	73.792	1.93879	**0.39262**
0.5	884.8	64.1	820.7	23.315	73.838	1.93758	**0.39349**
1	896.8	70.0	826.8	23.300	73.789	1.93887	**0.39256**
2	914.1	88.4	825.7	23.303	73.798	1.93863	**0.39274**
4	962.0	113.2	848.8	23.244	73.612	1.94353	**0.38922**
8	1022.6	151.3	871.4	23.187	73.431	1.94833	**0.38580**
16	1272.5	201.5	1071.0	22.680	71.825	1.99189	**0.35550**
32	1463.7	286.0	1177.7	22.409	70.966	2.01598	**0.33930**
8	1371.7	195.3	1176.4	22.412	70.977	2.01569	**0.33949**
2	1303.6	128.7	1174.9	22.416	70.989	2.01534	**0.33972**
0.5	1204.6	70.4	1134.3	22.519	71.316	2.00610	**0.34589**

Tested By NC *Date* 10/1/2018 *Input Checked By* DS *Date* 10/16/2018

DCN: CT-S24F Date: 12/12/05 Revision: 5

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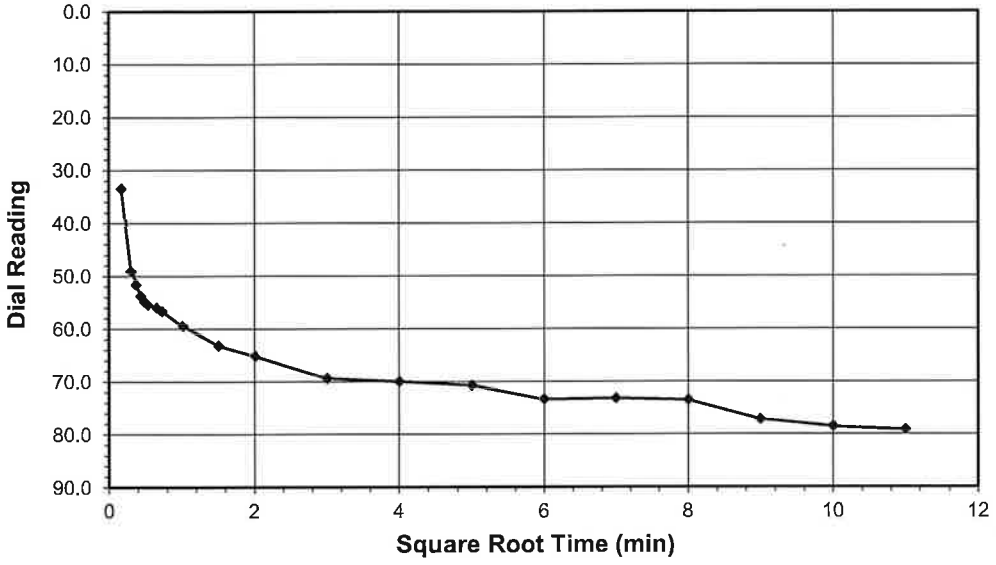
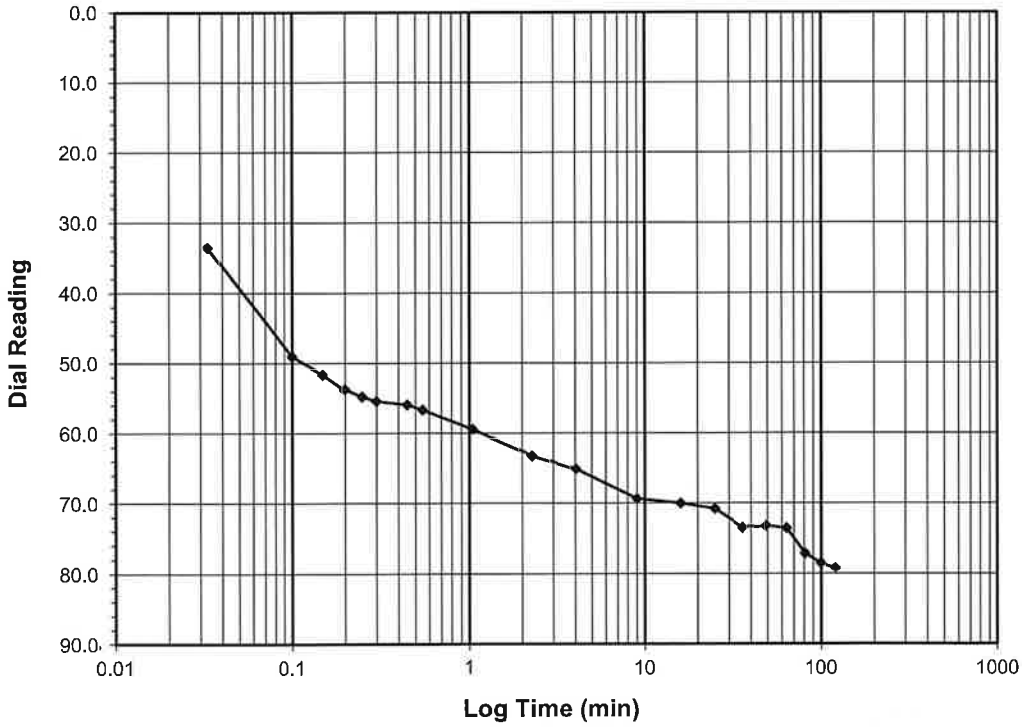
ONE DIMENSIONAL CONSOLIDATION

ASTM D 2435-11

Client	Wood PLC	Boring No.	B-20
Client Project	2424-18-135 (PS-902)	Depth (ft)	8.5-10.5
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-001	Visual Description	DARK BROWN CLAYEY SAND

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED





Test Load	**(tsf)**	**0.0-0.25**
Final Reading	**(div)**	**79.1**
Consolidometer No.		**N144**
1 Division	(in)	0.0001
Start Date		10/1/2018
Start Time		13:11:05

Elapsed Time (min)	Dial Reading (div)
Initial	**0.0**
0.03	33.4
0.10	49.0
0.15	51.5
0.20	53.7
0.25	54.8
0.30	55.4
0.45	55.9
0.55	56.6
1.05	59.4
2.30	63.1
4.05	65.1
9.05	69.3
16.05	70.0
25.05	70.7
36.07	73.4
49.07	73.2
64.07	73.5
81.07	77.1
100.07	78.5
121.07	79.1

Tested By NC *Date* 10/1/2018 *Checked By* DS *Date* 10/16/2018

DCN: CT-24E Date: 3/2/96 C:\Users\Lab#02\Desktop\Projects Folder\Nashville Projects\2018\N2018-028 - WOOD - PS-902\001\[N2018-028-001-001 D2435.xlsm]FINAL PLOT

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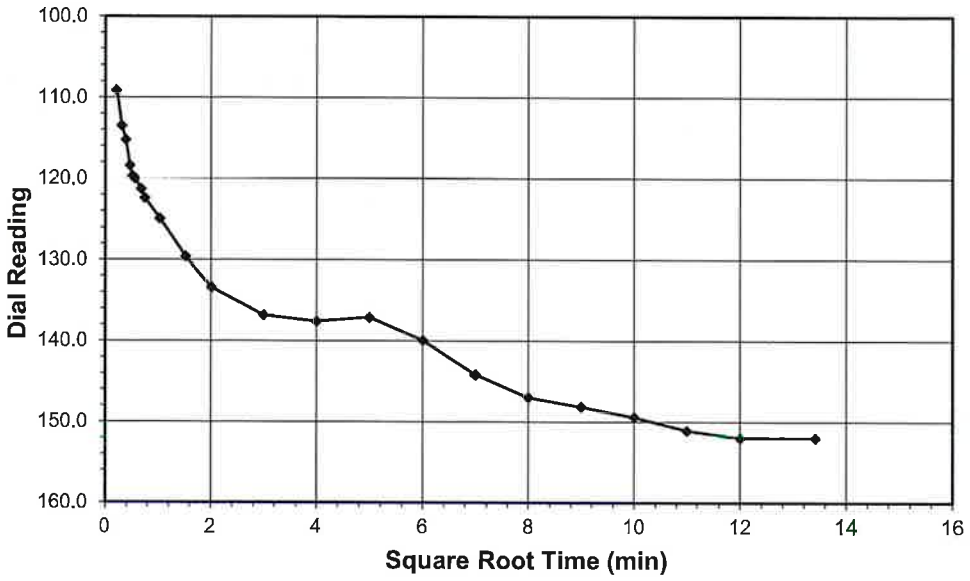
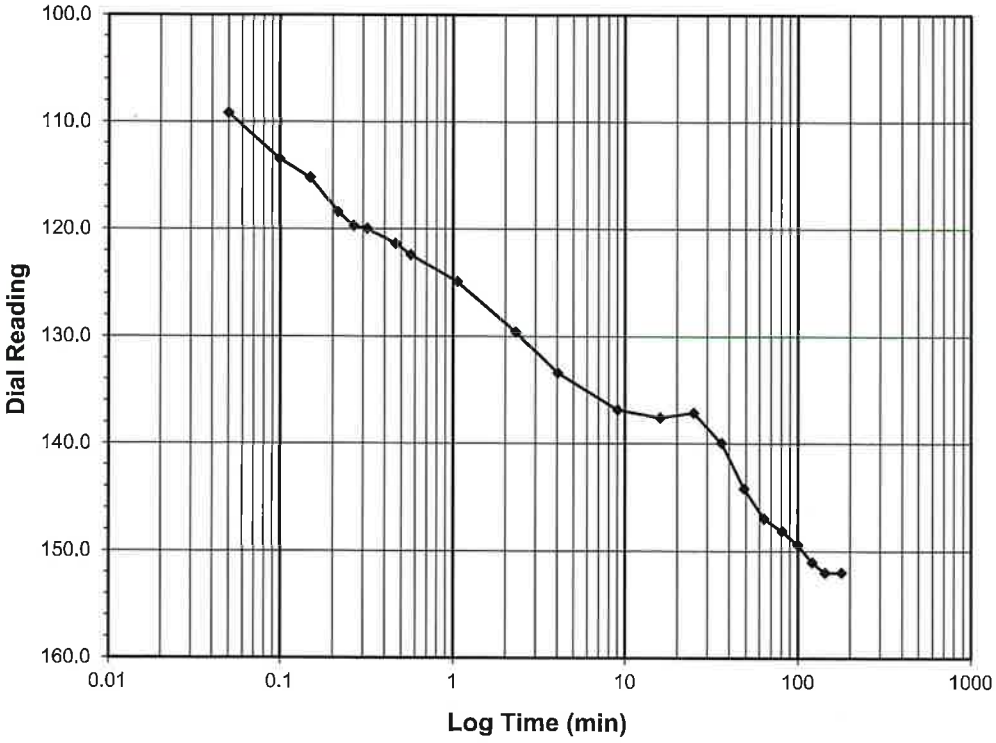
ONE DIMENSIONAL CONSOLIDATION

ASTM D 2435-11

Client	Wood PLC	Boring No.	B-20
Client Project	2424-18-135 (PS-902)	Depth (ft)	8.5-10.5
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-001	Visual Description	DARK BROWN CLAYEY SAND

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED





Test Load	**(tsf)**	**0.25-0.5**
Final Reading	**(div)**	**152.0**
Consolidometer No.		**N144**
1 Division	(in)	0.0001
Start Date		10/2/2018
Start Time		1:11:33

Elapsed Time (min)	Dial Reading (div)
Initial	**79.1**
0.05	109.2
0.10	113.5
0.15	115.2
0.22	118.4
0.27	119.7
0.32	120.0
0.47	121.3
0.57	122.4
1.07	124.9
2.32	129.6
4.07	133.4
9.07	136.8
16.07	137.6
25.08	137.1
36.07	139.9
49.08	144.2
64.08	147.0
81.08	148.1
100.08	149.4
121.08	151.0
144.08	152.0
180.08	152.0

Tested By NC *Date* 10/2/2018 *Checked By* DS *Date* 10/16/2018

DCN: CT-24E Date: 12/18/2015 *C:\Users\Standard02\Desktop\Projects Folder\Nashville Projects\2018\N2018-028 - WOOD - PS-902\001\[N2018-028-001-001 D2435.xlsm]FINAL PLOT*

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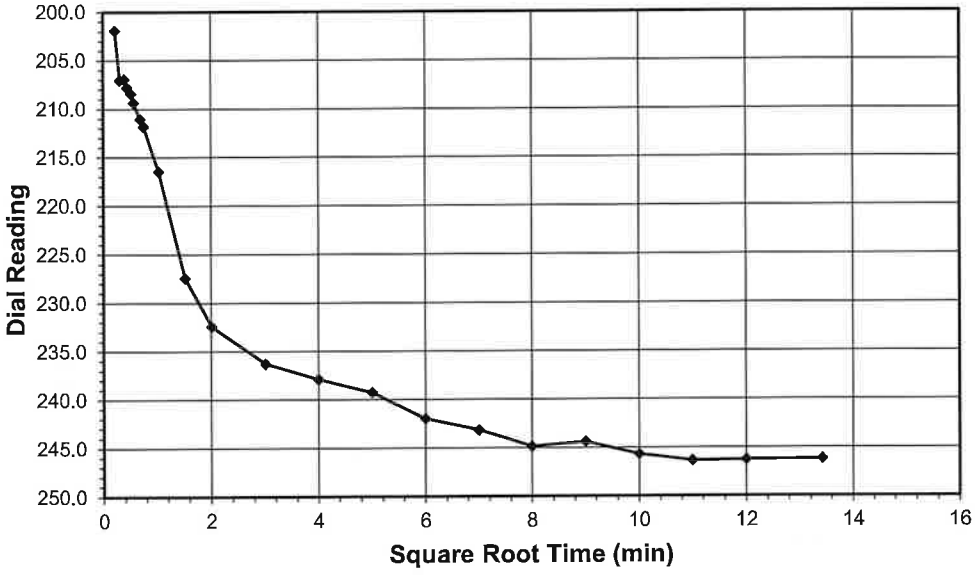
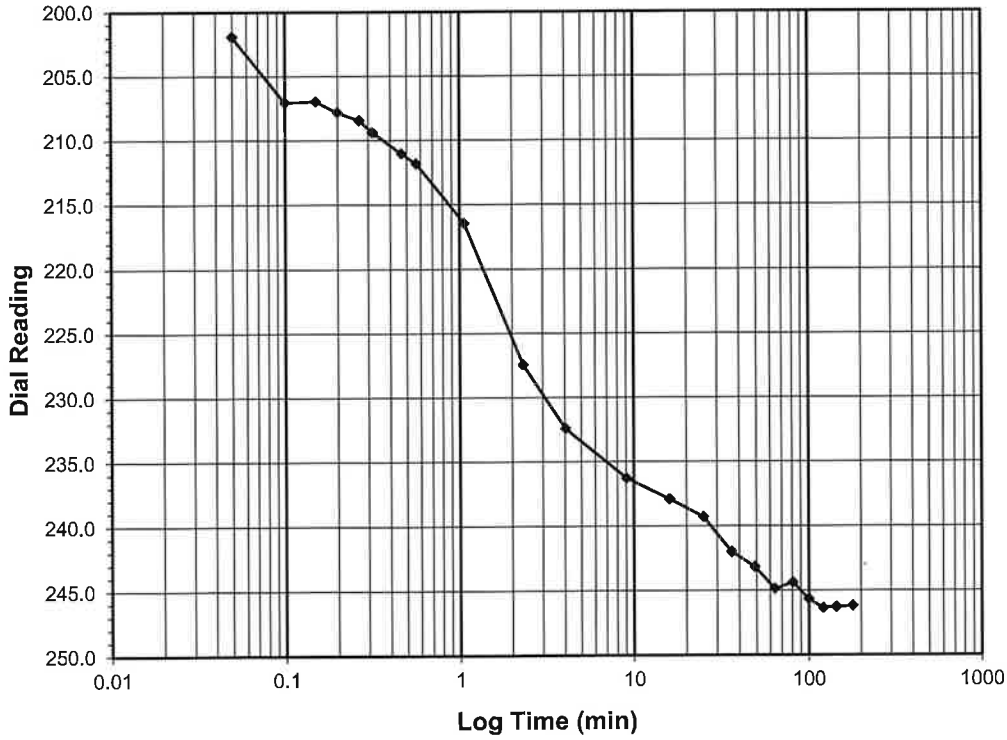
ONE DIMENSIONAL CONSOLIDATION

ASTM D 2435-11

Client	Wood PLC	Boring No.	B-20
Client Project	2424-18-135 (PS-902)	Depth (ft)	8.5-10.5
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-001	Visual Description	DARK BROWN CLAYEY SAND

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED





Test Load	**(tsf)**	**0.5-1.0**
Final Reading	**(div)**	**246.2**
Consolidometer No.		**N144**
1 Division	(in)	0.0001
Start Date		10/2/2018
Start Time		13:11:33

Elapsed Time (min)	Dial Reading (div)
Initial	**152.0**
0.05	201.9
0.10	207.0
0.15	206.9
0.20	207.8
0.27	208.4
0.32	209.4
0.47	211.0
0.57	211.8
1.07	216.5
2.32	227.4
4.07	232.4
9.07	236.3
16.07	237.9
25.07	239.3
36.07	242.0
49.07	243.1
64.08	244.9
81.08	244.4
100.08	245.7
121.08	246.3
144.08	246.2
180.08	246.2

Tested By NC *Date* 10/2/2018 *Checked By* DS *Date* 10/16/2018

DCN: CT-24E Date: 3/2/08 *C:\Users\Test Lab 202\Desktop\Projects Folder\Nashville Projects\2018\N2018-028 - WOOD - PS-902\001\[N2018-028-001-001 D2435.xlsm]FINAL PLOT*

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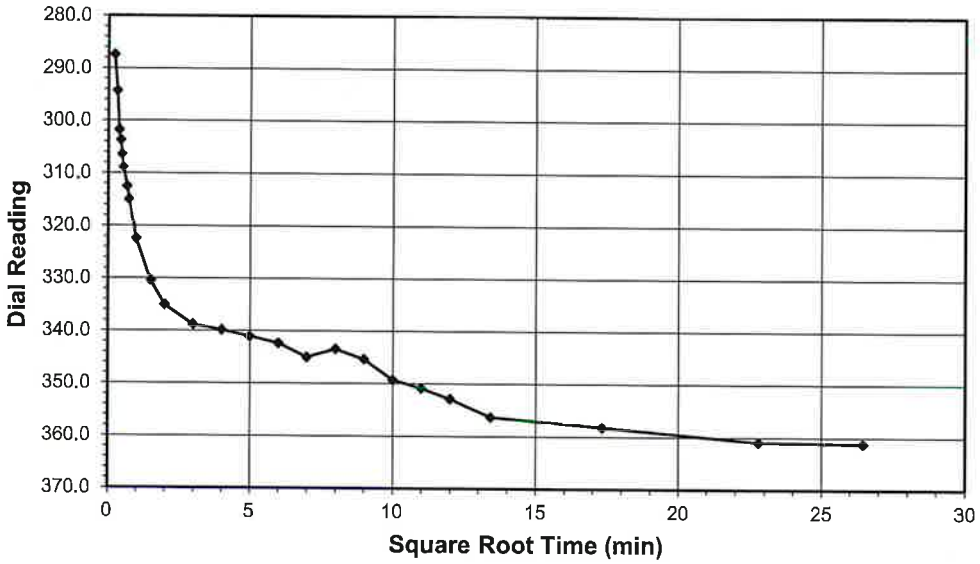
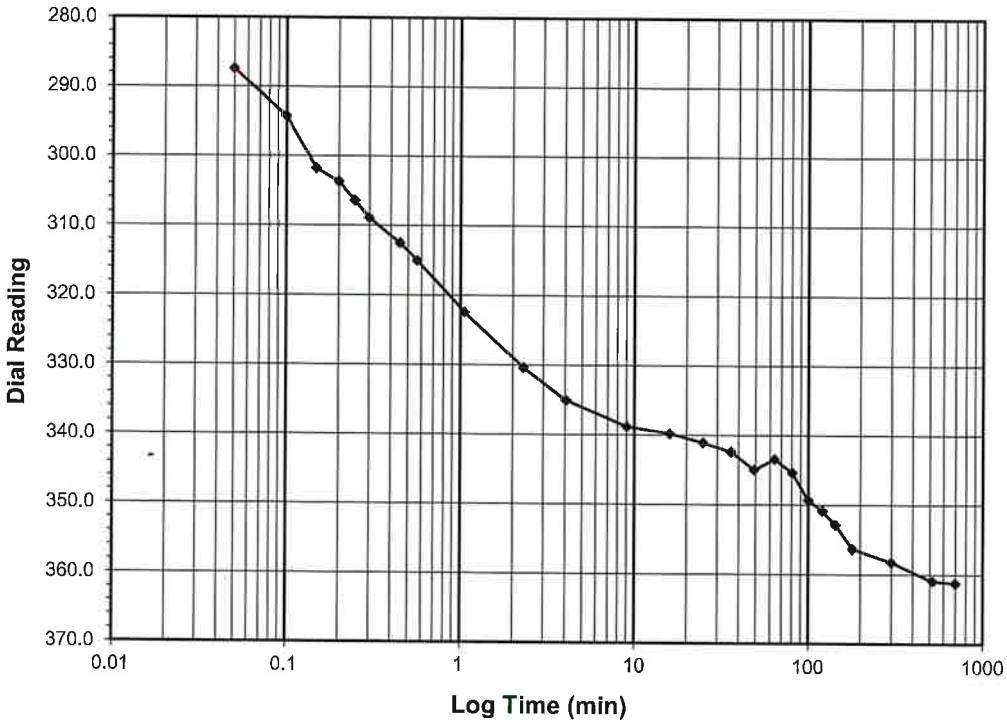
ONE DIMENSIONAL CONSOLIDATION

ASTM D 2435-11

Client	Wood PLC	Boring No.	B-20
Client Project	2424-18-135 (PS-902)	Depth (ft)	8.5-10.5
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-001	Visual Description	DARK BROWN CLAYEY SAND

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED





Test Load	**(tsf)**	**1.0-2.0**
Final Reading	**(div)**	**361.2**
Consolidometer No.		**N144**
1 Division	(in)	0.0001
Start Date		10/3/2018
Start Time		1:12:00

Elapsed Time (min)	Dial Reading (div)
Initial	**246.2**
0.05	287.4
0.10	294.2
0.15	301.8
0.20	303.7
0.25	306.4
0.30	308.9
0.45	312.5
0.57	315.0
1.07	322.4
2.32	330.4
4.07	335.1
9.07	338.8
16.07	339.8
25.05	341.0
36.07	342.3
49.07	345.0
64.07	343.4
81.07	345.3
100.08	349.3
121.08	350.8
144.08	352.8
180.08	356.3
300.08	358.2
520.08	360.9
700.08	361.2

Tested By NC *Date* 10/3/2018 *Checked By* DS *Date* 10/16/2018

DCN: CT-24E Date: 3/2/98 C:\Users\TenLab#02\Desktop\Projects Folder\Nashville Projects\2018\N2018-028 - WOOD - PS-902\001\[N2018-028-001-001 D2435.xlsm]FINAL PLOT

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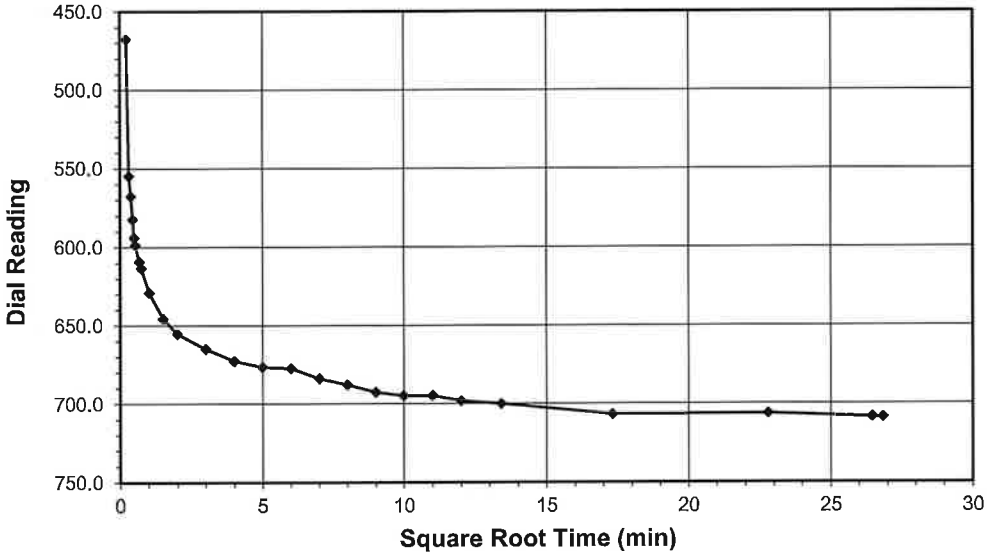
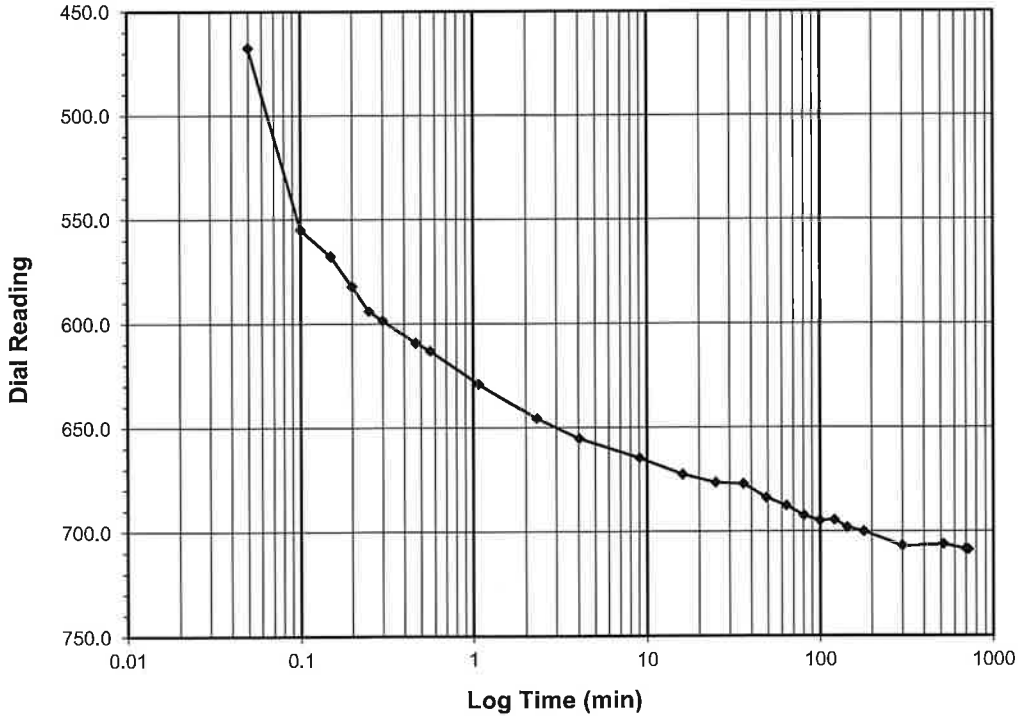
ASTM D 2435-11

Client	Wood PLC	Boring No.	B-20
Client Project	2424-18-135 (PS-902)	Depth (ft)	8.5-10.5
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-001	Visual Description	DARK BROWN CLAYEY SAND

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED





Test Load	**(tsf)**	**2.0-4.0**
Final Reading	**(div)**	**708.6**
Consolidometer No.		**N144**
1 Division	(in)	0.0001
Start Date		10/3/2018
Start Time		13:12:12

Elapsed Time (min)	Dial Reading (div)
Initial	**361.2**
0.05	467.5
0.10	554.8
0.15	567.5
0.20	582.0
0.25	593.8
0.30	598.4
0.47	609.1
0.57	613.1
1.07	628.9
2.32	645.5
4.07	655.2
9.07	664.7
16.07	672.5
25.07	676.5
36.07	677.1
49.07	683.8
64.07	687.6
81.07	692.4
100.07	694.7
121.07	694.5
144.07	698.0
180.07	700.0
300.08	706.7
520.08	706.1
700.10	708.3
720.48	708.6

Tested By NC *Date* 10/3/2018 *Checked By* DS *Date* 10/16/2018

DCN: CT-24E Date: 3/2/[illegible] *C:\Users\Tech Lab#02\Desktop\Projects Folder\Nashville Projects\2018\N2018-028 - WOOD - PS-902\001\[N2018-028-001-001 D2435.xlsm]FINAL PLOT*

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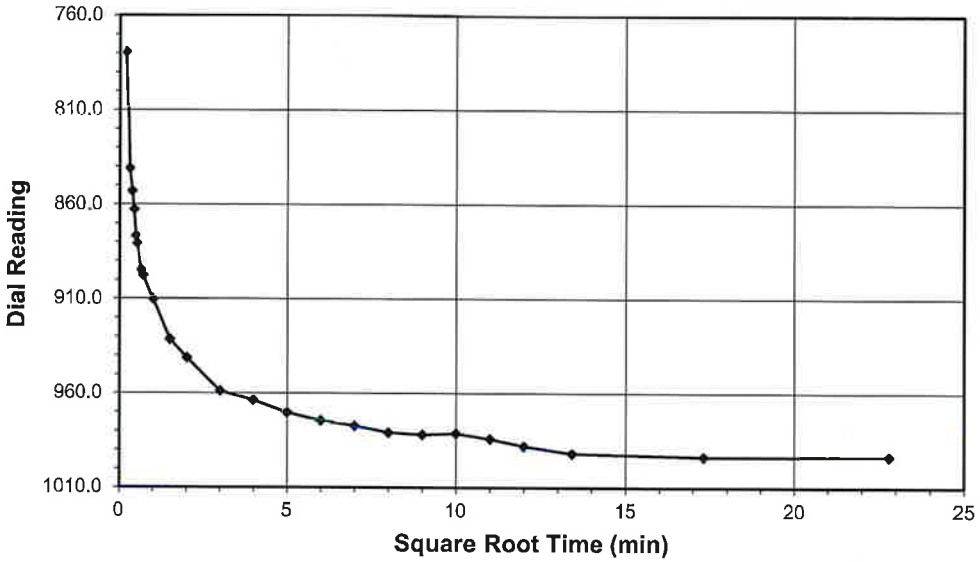
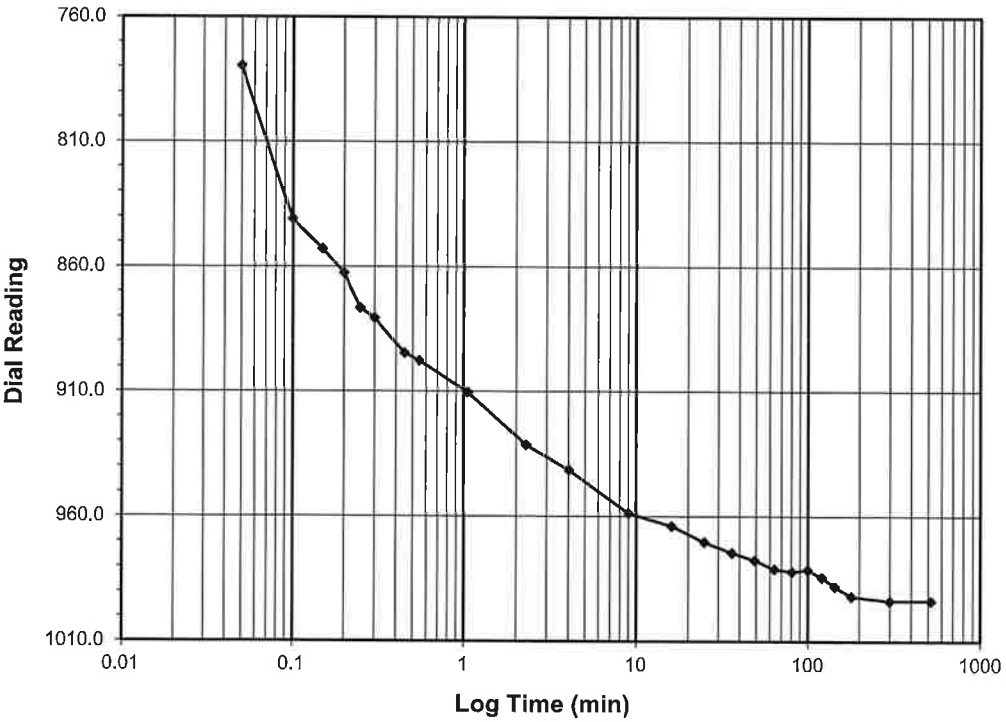
ONE DIMENSIONAL CONSOLIDATION

ASTM D 2435-11

Client	Wood PLC	Boring No.	B-20
Client Project	2424-18-135 (PS-902)	Depth (ft)	8.5-10.5
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-001	Visual Description	DARK BROWN CLAYEY SAND

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED





Test Load	**(tsf)**	**4.0-8.0**
Final Reading	**(div)**	**993.7**
Consolidometer No.		**N144**
1 Division	(in)	0.0001
Start Date		10/4/2018
Start Time		1:12:41

Elapsed Time (min)	Dial Reading (div)
Initial	**708.6**
0.05	779.6
0.10	841.0
0.15	852.9
0.20	862.5
0.25	876.5
0.30	880.6
0.45	894.6
0.55	897.7
1.05	910.2
2.30	931.4
4.05	941.3
9.05	958.7
16.05	963.9
25.05	970.2
36.05	974.4
49.05	977.3
64.05	980.9
81.05	982.0
100.05	981.3
121.05	984.2
144.07	987.9
180.07	991.9
300.03	993.6
520.05	993.7

Tested By NC *Date* 10/4/2018 *Checked By* DS *Date* 10/16/2018

DCN: CT-24E Date: 3/2/[illegible] *C:\Users\Lab#02\Desktop\Projects Folder\Nashville Projects\2018\N2018-028 - WOOD - PS-902\001\[N2018-028-001-001 D2435.xlsm]FINAL PLOT*

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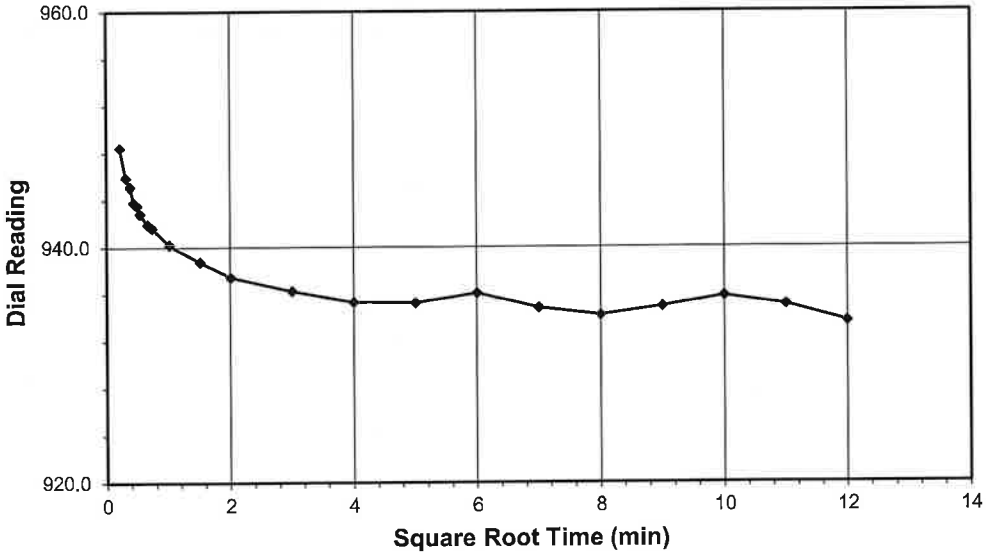
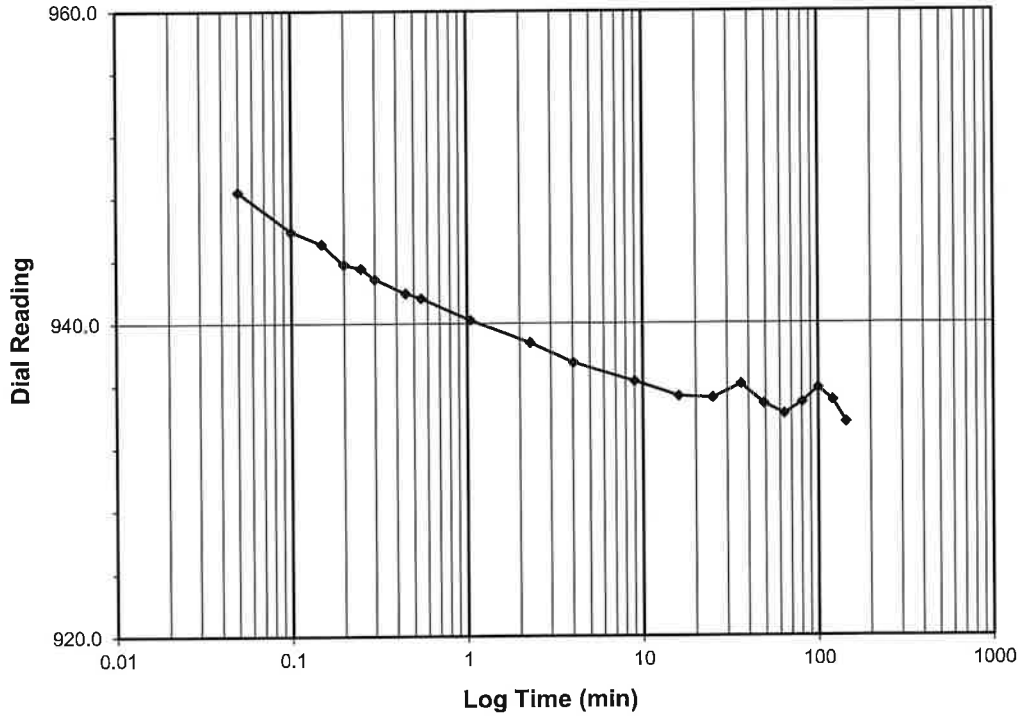
ONE DIMENSIONAL CONSOLIDATION

ASTM D 2435-11

Client	Wood PLC	Boring No.	B-20
Client Project	2424-18-135 (PS-902)	Depth (ft)	8.5-10.5
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-001	Visual Description	DARK BROWN CLAYEY SAND

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED





Test Load	**(tsf)**	**8.0-2.0**
Final Reading	**(div)**	**933.6**
Consolidometer No.		**N144**
1 Division	(in)	0.0001
Start Date		10/4/2018
Start Time		13:12:55

Elapsed Time (min)	Dial Reading (div)
Initial	**993.7**
0.05	948.4
0.10	945.9
0.15	945.1
0.20	943.8
0.25	943.5
0.30	942.8
0.45	941.9
0.55	941.6
1.05	940.2
2.30	938.7
4.05	937.5
9.05	936.3
16.05	935.3
25.05	935.2
36.05	936.1
49.07	934.8
64.07	934.2
81.07	934.9
100.07	935.8
121.05	935.0
144.05	933.6

Tested By NC *Date* 10/4/2018 *Checked By* DS *Date* 10/16/2018

DCN: CT-24E Date: 3/2/93 S:\[illegible]\Lab#02\Desktop\Projects Folder\Nashville Projects\2018\N2018-028 - WOOD - PS-902\001\[N2018-028-001-001 D2435.xlsm]FINAL PLOT

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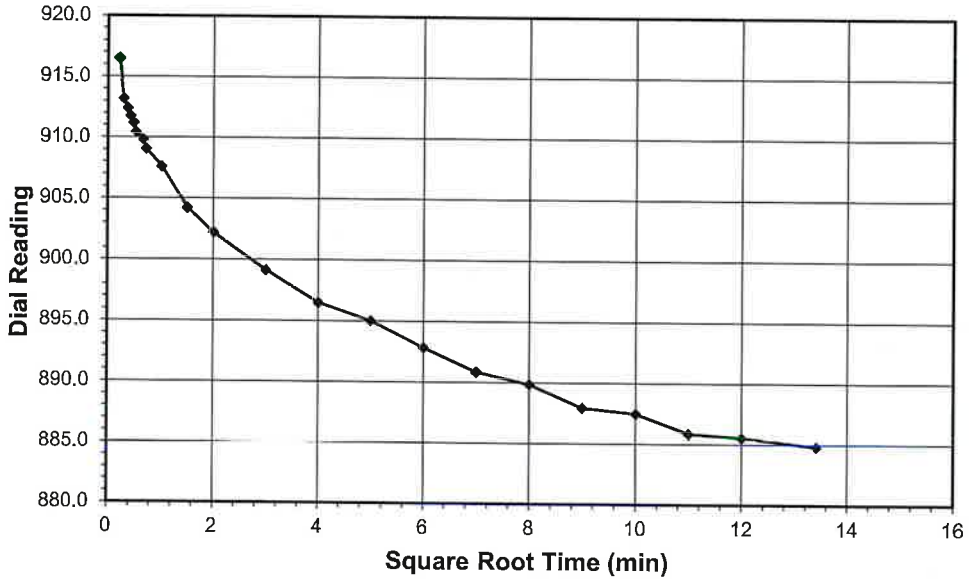
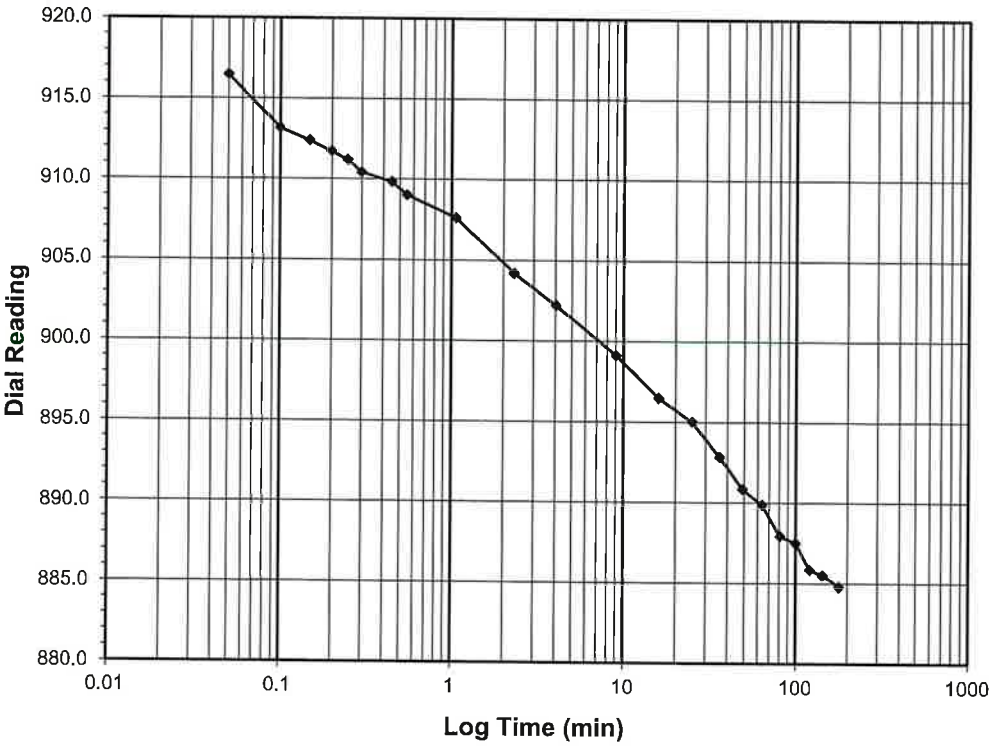
ONE DIMENSIONAL CONSOLIDATION

ASTM D 2435-11

Client	Wood PLC	Boring No.	B-20
Client Project	2424-18-135 (PS-902)	Depth (ft)	8.5-10.5
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-001	Visual Description	DARK BROWN CLAYEY SAND

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED





Test Load	**(tsf)**	**2.0-0.5**
Final Reading	**(div)**	**884.8**
Consolidometer No.		**N144**
1 Division	(in)	0.0001
Start Date		10/5/2018
Start Time		1:13:24

Elapsed Time (min)	Dial Reading (div)
Initial	**933.6**
0.05	916.5
0.10	913.2
0.15	912.4
0.20	911.7
0.25	911.2
0.30	910.4
0.45	909.8
0.55	909.0
1.07	907.6
2.32	904.2
4.07	902.2
9.07	899.1
16.07	896.5
25.07	895.0
36.07	892.8
49.07	890.8
64.07	889.9
81.08	887.9
100.08	887.5
121.08	885.9
144.08	885.5
180.08	884.8

Tested By NC *Date* 10/5/2018 *Checked By* DS *Date* 10/16/2018

DCN: CT-24E Date: 3/2/08 Saved by: Tenab902 *C:\Users\Tenab902\Desktop\Projects Folder\Nashville Projects\2018\N2018-028 - WOOD - PS-902\001\[N2018-028-001-001 D2435.xlsm]FINAL PLOT*

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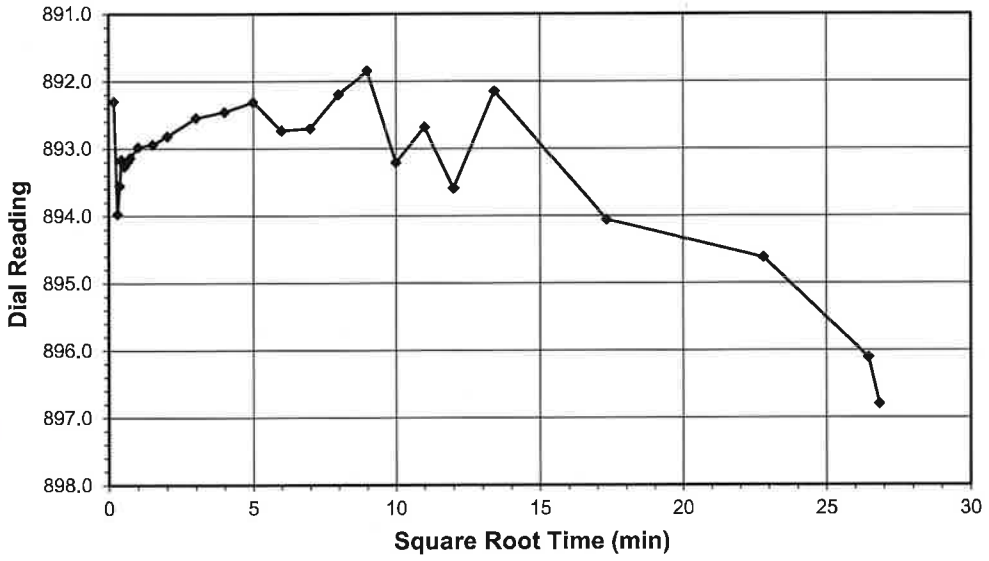
ONE DIMENSIONAL CONSOLIDATION

ASTM D 2435-11

Client	Wood PLC	Boring No.	B-20
Client Project	2424-18-135 (PS-902)	Depth (ft)	8.5-10.5
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-001	Visual Description	DARK BROWN CLAYEY SAND

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED



Test Load	**(tsf)**	**0.5-1.0**
Final Reading	**(div)**	**896.8**
Consolidometer No.		**N144**
1 Division	(in)	0.0001
Start Date		10/5/2018
Start Time		13:13:52

Elapsed Time (min)	Dial Reading (div)
Initial	**884.8**
0.03	892.3
0.10	894.0
0.15	893.6
0.20	893.2
0.25	893.2
0.30	893.3
0.45	893.2
0.55	893.1
1.05	893.0
2.30	892.9
4.05	892.8
9.05	892.5
16.05	892.5
25.05	892.3
36.05	892.7
49.05	892.7
64.05	892.2
81.05	891.8
100.05	893.2
121.05	892.7
144.07	893.6
180.07	892.2
300.07	894.1
520.03	894.6
700.03	896.1
720.35	896.8

Tested By NC *Date* 10/5/2018 *Checked By* DS *Date* 10/16/2018

DCN: CT-24E Date: 3/2/[illegible] C:\Users\Test Lab#02\Desktop\Projects Folder\Nashville Projects\2018\N2018-028 - WOOD - PS-902\001\[N2018-028-001-001 D2435.xlsm]FINAL PLOT

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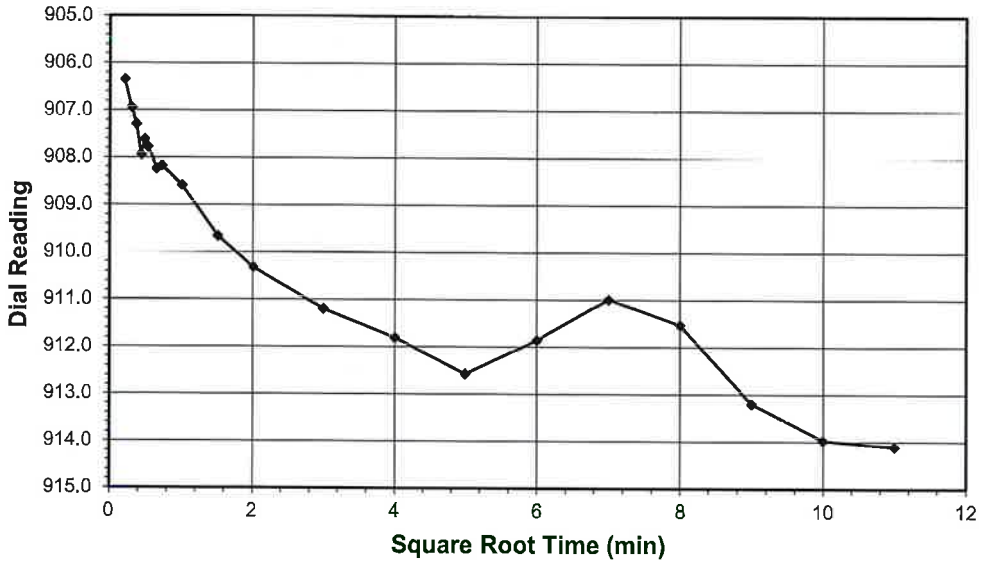
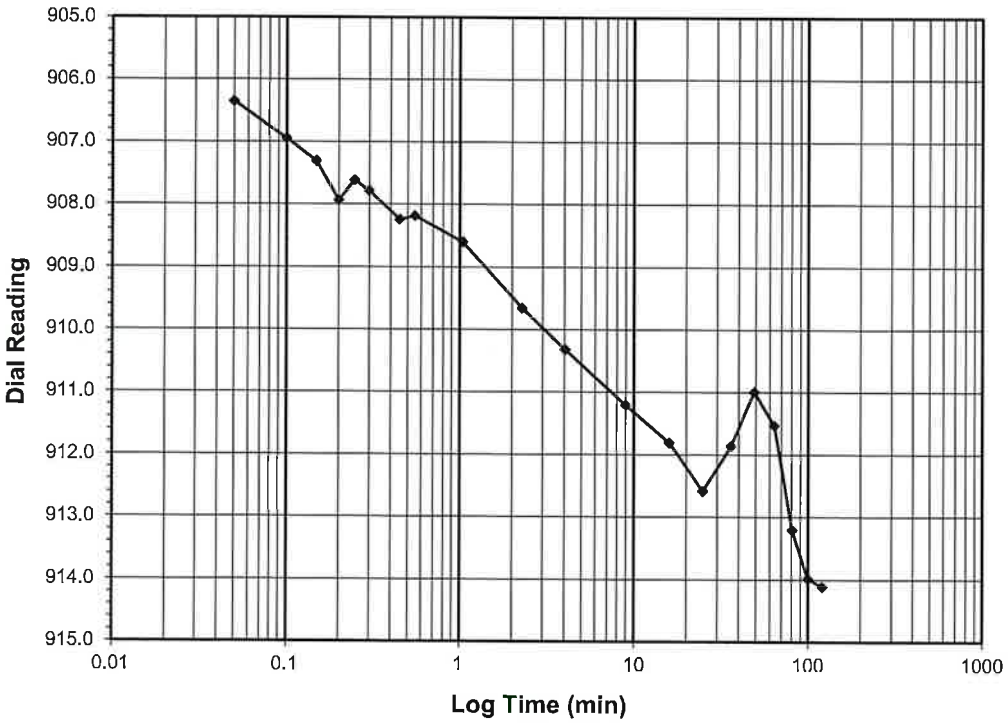
ASTM D 2435-11

Client	Wood PLC	Boring No.	B-20
Client Project	2424-18-135 (PS-902)	Depth (ft)	8.5-10.5
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-001	Visual Description	DARK BROWN CLAYEY SAND

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED





Test Load (tsf)	**1.0-2.0**
Final Reading (div)	**914.1**
Consolidometer No.	**N144**
1 Division (in)	0.0001
Start Date	10/6/2018
Start Time	1:14:14

Elapsed Time (min)	Dial Reading (div)
Initial	**896.8**
0.05	906.4
0.10	906.9
0.15	907.3
0.20	907.9
0.25	907.6
0.30	907.8
0.45	908.2
0.55	908.2
1.05	908.6
2.30	909.7
4.05	910.3
9.05	911.2
16.05	911.8
25.05	912.6
36.05	911.9
49.05	911.0
64.05	911.5
81.05	913.2
100.05	914.0
121.05	914.1

Tested By NC *Date* 10/6/2018 *Checked By* DS *Date* 10/16/2018

DCN: CT-24E Date: 3/2/[illegible] *C:\Users\Tech Lab#02\Desktop\Projects Folder\Nashville Projects\2018\N2018-028 - WOOD - PS-902\001\[N2018-028-001-001 D2435.xlsm]FINAL PLOT*

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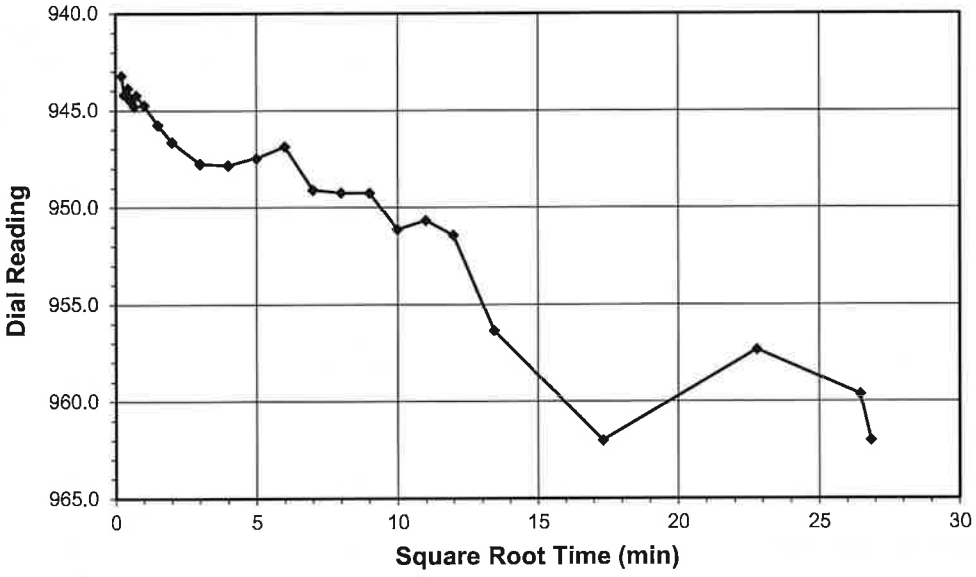
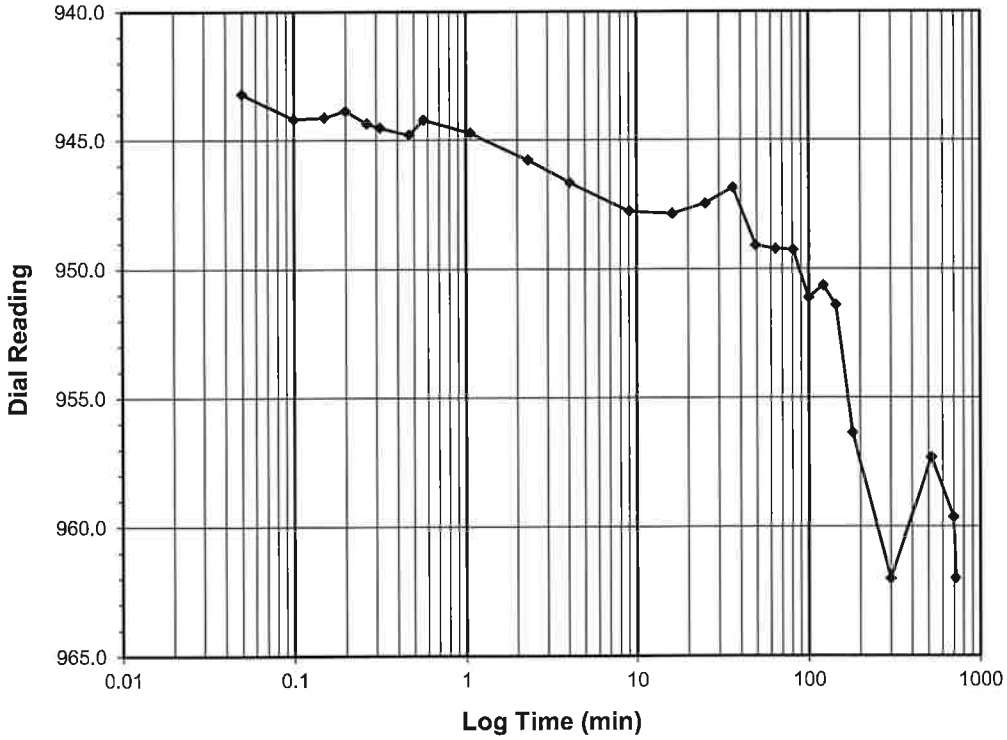
ASTM D 2435-11

Client	Wood PLC	Boring No.	B-20
Client Project	2424-18-135 (PS-902)	Depth (ft)	8.5-10.5
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-001	Visual Description	DARK BROWN CLAYEY SAND

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED





Test Load	**(tsf)**	**2.0-4.0**
Final Reading	**(div)**	**962.0**
Consolidometer No.		**N144**
1 Division	(in)	0.0001
Start Date		10/6/2018
Start Time		13:14:23

Elapsed Time (min)	Dial Reading (div)
Initial	**914.1**
0.05	943.2
0.10	944.2
0.15	944.1
0.20	943.9
0.27	944.4
0.32	944.5
0.47	944.8
0.57	944.2
1.07	944.7
2.32	945.8
4.07	946.7
9.07	947.8
16.07	947.9
25.07	947.5
36.07	946.8
49.08	949.1
64.08	949.2
81.08	949.3
100.08	951.1
121.08	950.6
144.08	951.4
180.08	956.4
300.10	962.0
520.08	957.3
700.08	959.6
720.48	962.0

Tested By NC *Date* 10/6/2018 *Checked By* DS *Date* 10/16/2018

DCN: CT-24E Date: 3/2/98 Revised by: [illegible] C:\Users\Terrilab902\Desktop\Projects Folder\Nashville Projects\2018\N2018-028 - WOOD - PS-902\001\[N2018-028-001-001 D2435.xlsm]FINAL PLOT

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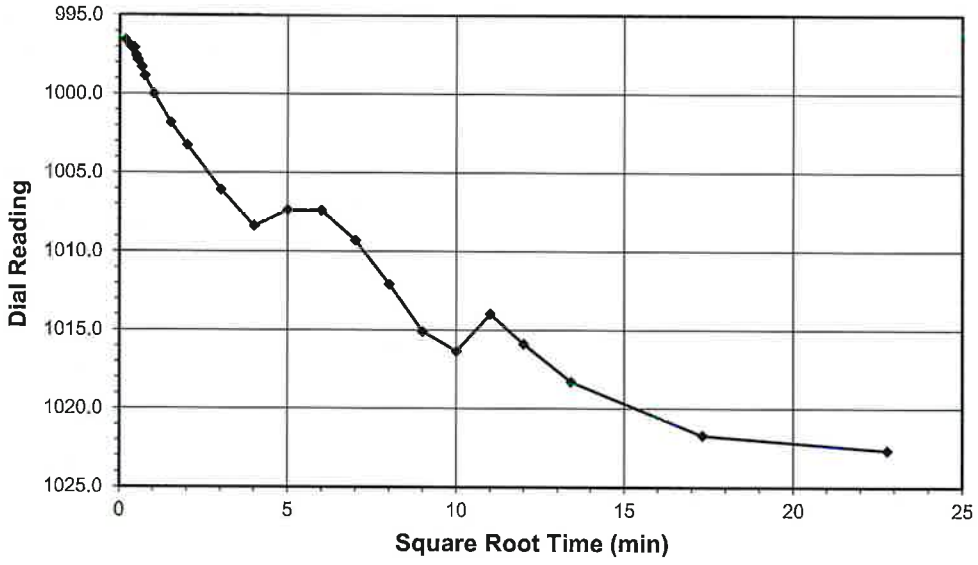
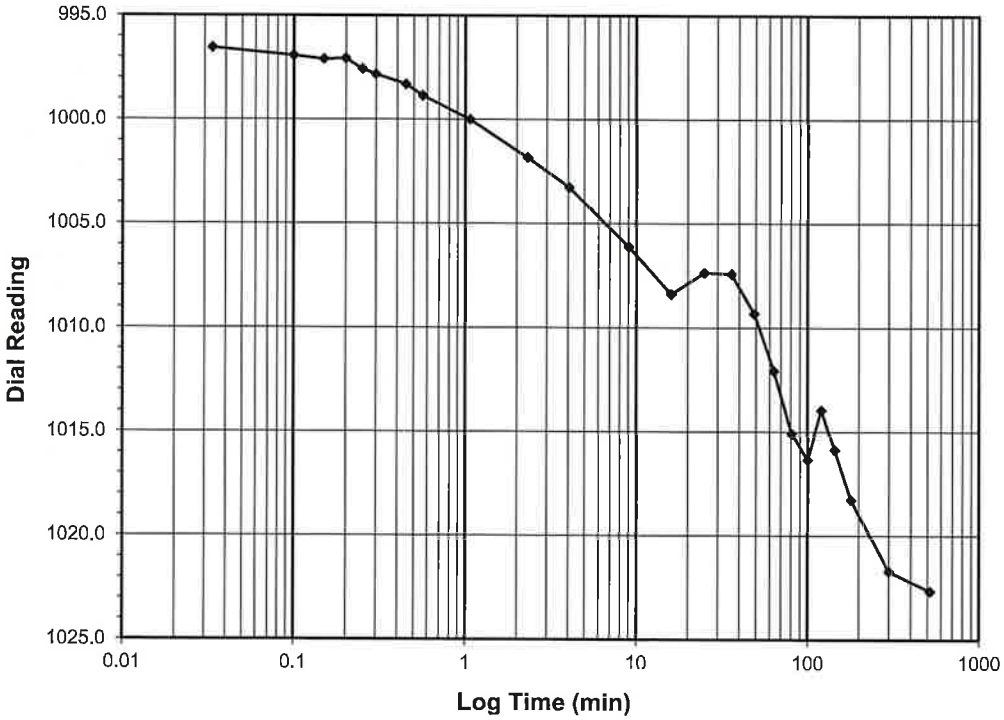
ASTM D 2435-11

Client	Wood PLC	Boring No.	B-20
Client Project	2424-18-135 (PS-902)	Depth (ft)	8.5-10.5
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-001	Visual Description	DARK BROWN CLAYEY SAND

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED





Test Load	**(tsf)**	**4.0-8.0**
Final Reading	**(div)**	**1022.6**
Consolidometer No.		**N144**
1 Division	(in)	0.0001
Start Date		10/7/2018
Start Time		1:14:52

Elapsed Time (min)	Dial Reading (div)
Initial	**962.0**
0.03	996.5
0.10	996.9
0.15	997.1
0.20	997.1
0.25	997.6
0.30	997.8
0.45	998.3
0.57	998.9
1.07	1000.0
2.32	1001.8
4.07	1003.3
9.07	1006.1
16.07	1008.4
25.07	1007.4
36.07	1007.4
49.07	1009.3
64.05	1012.1
81.05	1015.1
100.05	1016.3
121.05	1014.0
144.05	1015.9
180.05	1018.3
300.05	1021.7
520.08	1022.6

Tested By NC *Date* 10/7/2018 *Checked By* DS *Date* 10/16/2018

DCN: CT-24E Date: 3/2/[illegible] *[illegible]\Desktop\Projects Folder\Nashville Projects\2018\N2018-028 - WOOD - PS-902\001\[N2018-028-001-001 D2435.xlsm]FINAL PLOT*

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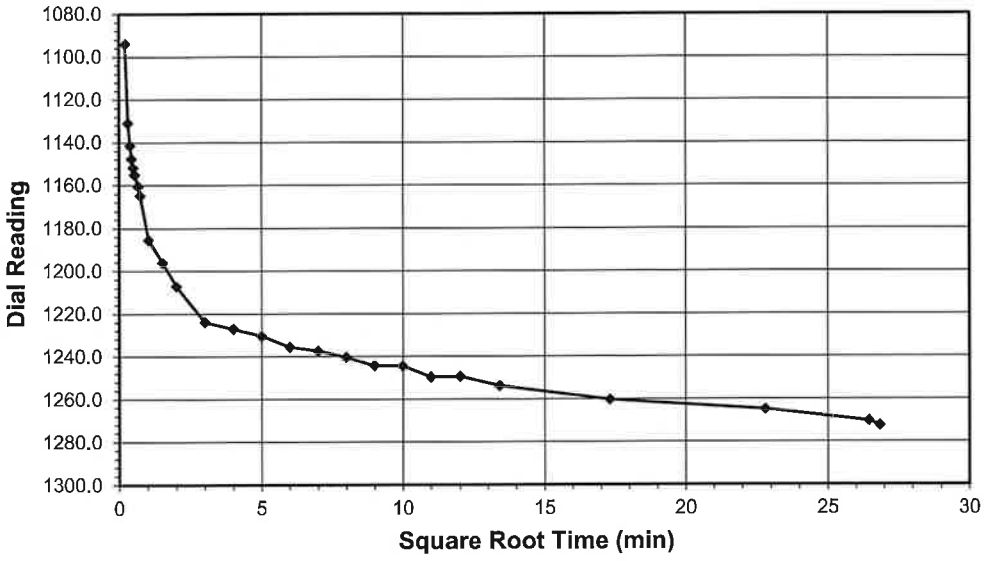
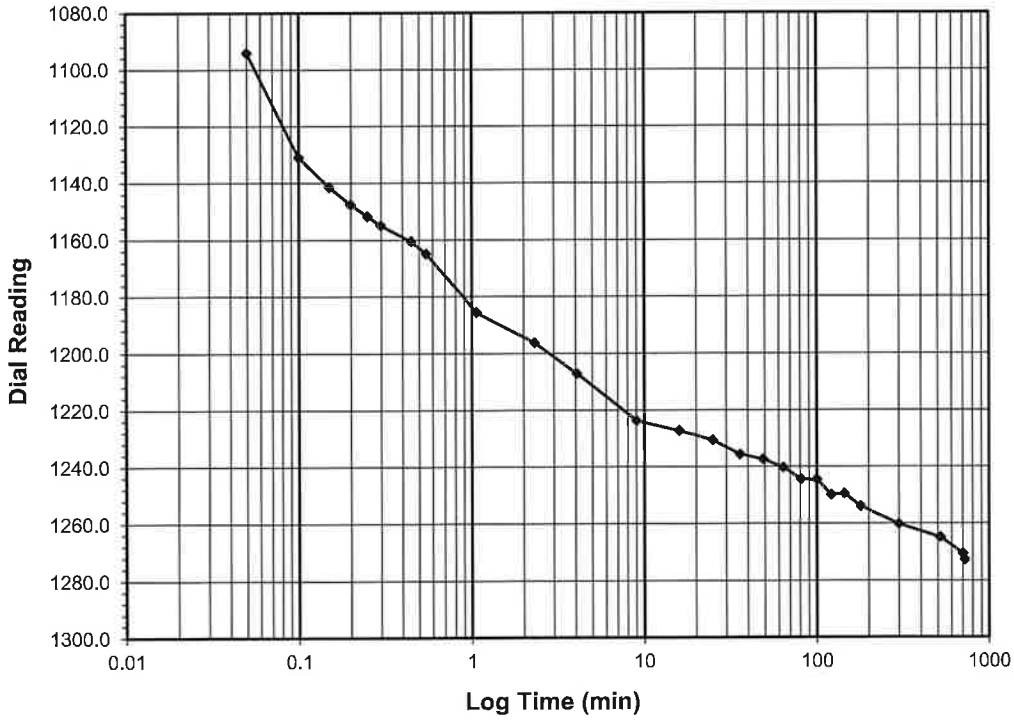
ONE DIMENSIONAL CONSOLIDATION

ASTM D 2435-11

Client	Wood PLC	Boring No.	B-20
Client Project	2424-18-135 (PS-902)	Depth (ft)	8.5-10.5
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-001	Visual Description	DARK BROWN CLAYEY SAND

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED





Test Load	**(tsf)**	**8.0-16.0**
Final Reading	**(div)**	**1272.5**
Consolidometer No.		**N144**
1 Division	(in)	0.0001
Start Date		10/7/2018
Start Time		13:15:03

Elapsed Time (min)	Dial Reading (div)
Initial	**1022.6**
0.05	1094.0
0.10	1130.9
0.15	1141.3
0.20	1147.5
0.25	1151.7
0.30	1155.0
0.45	1160.4
0.55	1164.8
1.07	1185.4
2.32	1196.1
4.07	1207.1
9.07	1223.8
16.07	1227.1
25.07	1230.5
36.07	1235.7
49.07	1237.4
64.07	1240.3
81.07	1244.3
100.07	1244.5
121.07	1249.8
144.08	1249.4
180.07	1253.8
300.07	1260.2
520.08	1264.8
700.08	1270.4
720.35	1272.5

Tested By NC *Date* 10/7/2018 *Checked By* DS *Date* 10/16/2018

DCN: CT-24E Date: 3/2/[illegible] *C:\Users\Test Lab#02\Desktop\Projects Folder\Nashville Projects\2018\N2018-028 - WOOD - PS-902\001\[N2018-028-001-001 D2435.xlsm]FINAL PLOT*

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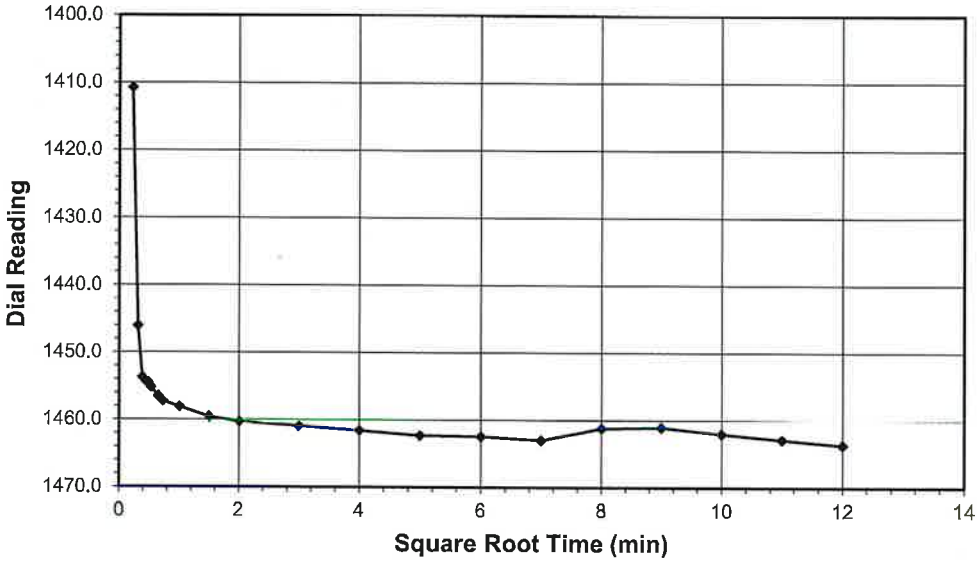
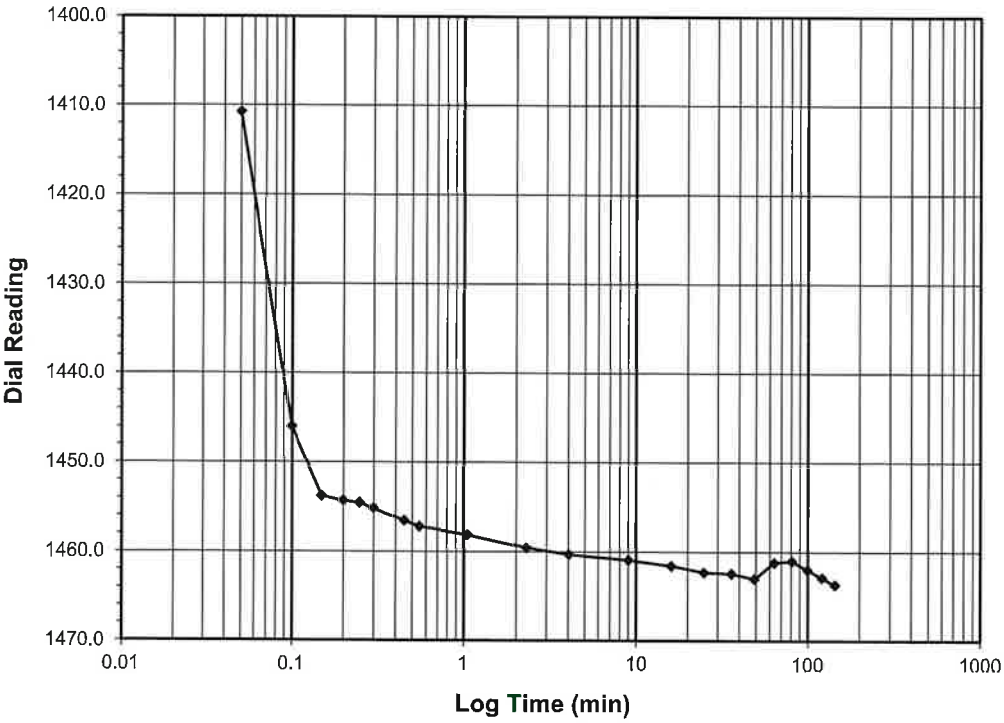
ASTM D 2435-11

Client	Wood PLC	Boring No.	B-20
Client Project	2424-18-135 (PS-902)	Depth (ft)	8.5-10.5
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-001	Visual Description	DARK BROWN CLAYEY SAND

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED





Test Load	**(tsf)**	**16.0-32.0**
Final Reading	**(div)**	**1463.7**
Consolidometer No.		**N144**
1 Division	(in)	0.0001
Start Date		10/8/2018
Start Time		1:15:24

Elapsed Time (min)	Dial Reading (div)
Initial	**1272.5**
0.05	1410.7
0.10	1446.0
0.15	1453.7
0.20	1454.3
0.25	1454.5
0.30	1455.2
0.45	1456.5
0.55	1457.2
1.05	1458.1
2.30	1459.6
4.05	1460.3
9.05	1460.9
16.05	1461.6
25.05	1462.3
36.05	1462.4
49.05	1463.0
64.05	1461.2
81.05	1461.0
100.05	1462.0
121.05	1462.9
144.05	1463.7

Tested By NC *Date* 10/8/2018 *Checked By* DS *Date* 10/16/2018

DCN: CT-24E Date: 3/2/[illegible] *C:\Users\Tech Lab#02\Desktop\Projects Folder\Nashville Projects\2018\N2018-028 - WOOD - PS-902\001\[N2018-028-001-001 D2435.xlsm]FINAL PLOT*

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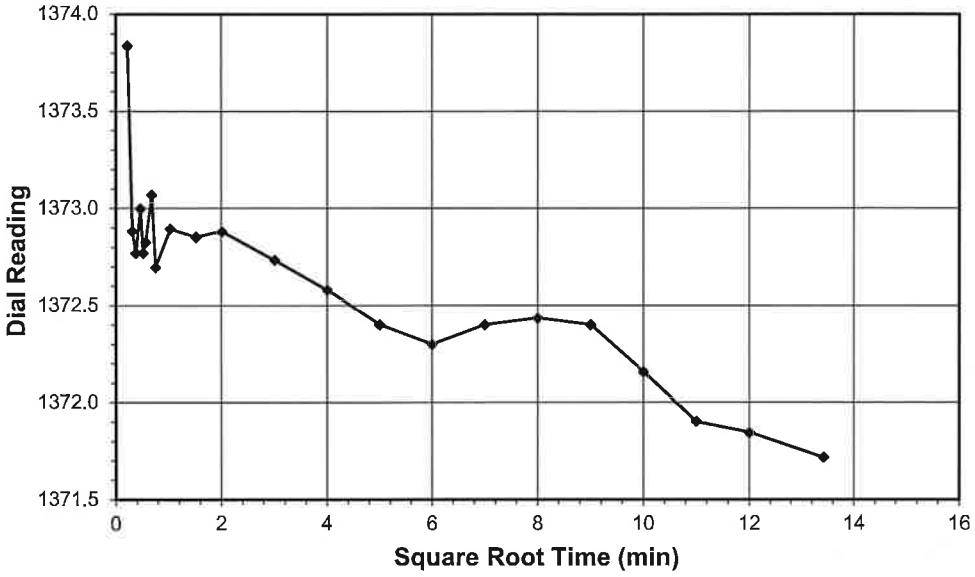
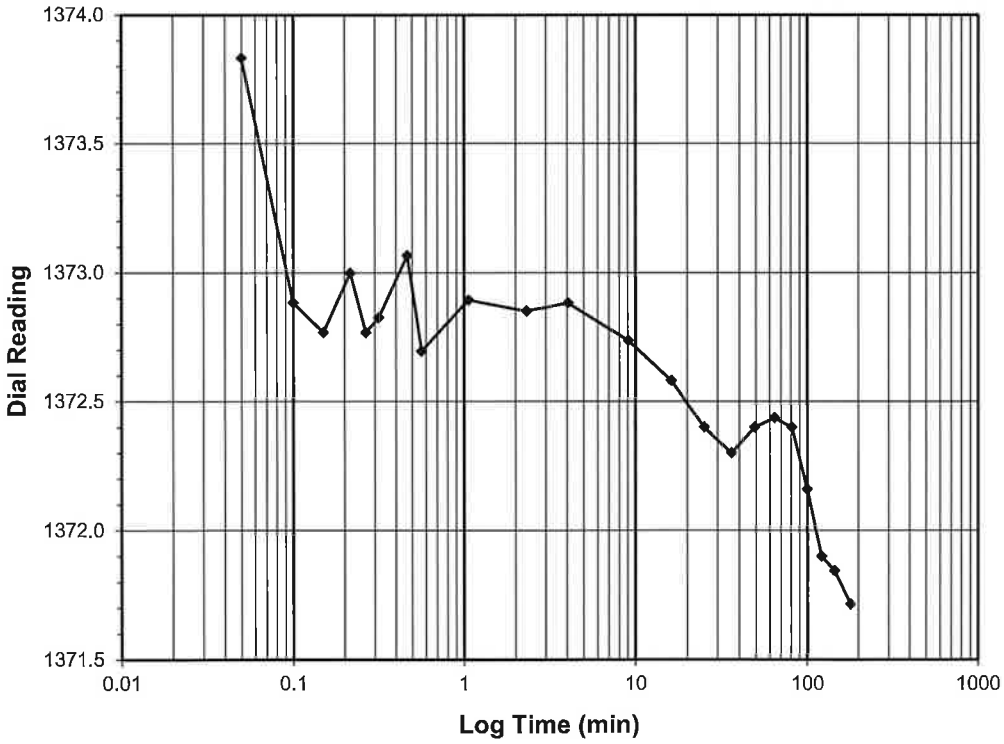
ONE DIMENSIONAL CONSOLIDATION

ASTM D 2435-11

Client	Wood PLC	Boring No.	B-20
Client Project	2424-18-135 (PS-902)	Depth (ft)	8.5-10.5
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-001	Visual Description	DARK BROWN CLAYEY SAND

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED





Test Load	**(tsf)**	**32.0-8.0**
Final Reading	**(div)**	**1371.7**
Consolidometer No.		**N144**
1 Division	(in)	0.0001
Start Date		10/8/2018
Start Time		13:15:29

Elapsed Time (min)	Dial Reading (div)
Initial	**1463.7**
0.05	1373.8
0.10	1372.9
0.15	1372.8
0.22	1373.0
0.27	1372.8
0.32	1372.8
0.47	1373.1
0.57	1372.7
1.07	1372.9
2.32	1372.9
4.07	1372.9
9.07	1372.7
16.07	1372.6
25.07	1372.4
36.07	1372.3
49.07	1372.4
64.07	1372.4
81.07	1372.4
100.07	1372.2
121.08	1371.9
144.08	1371.8
180.08	1371.7

Tested By NC *Date* 10/8/2018 *Checked By* DS *Date* 10/16/2018

DCN: CT-24E Date: 3/2/06 Revised by: *C:\Users\Nathan.Tweedy.ctr\Desktop\Projects Folder\Nashville Projects\2018\N2018-028 - WOOD - PS-902\001\[N2018-028-001-001 D2435.xlsm]FINAL PLOT*

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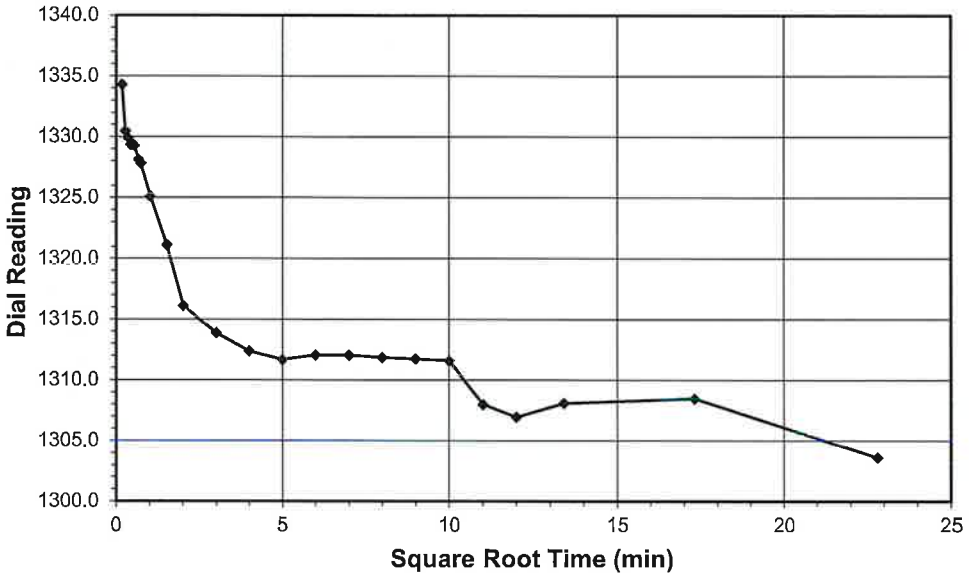
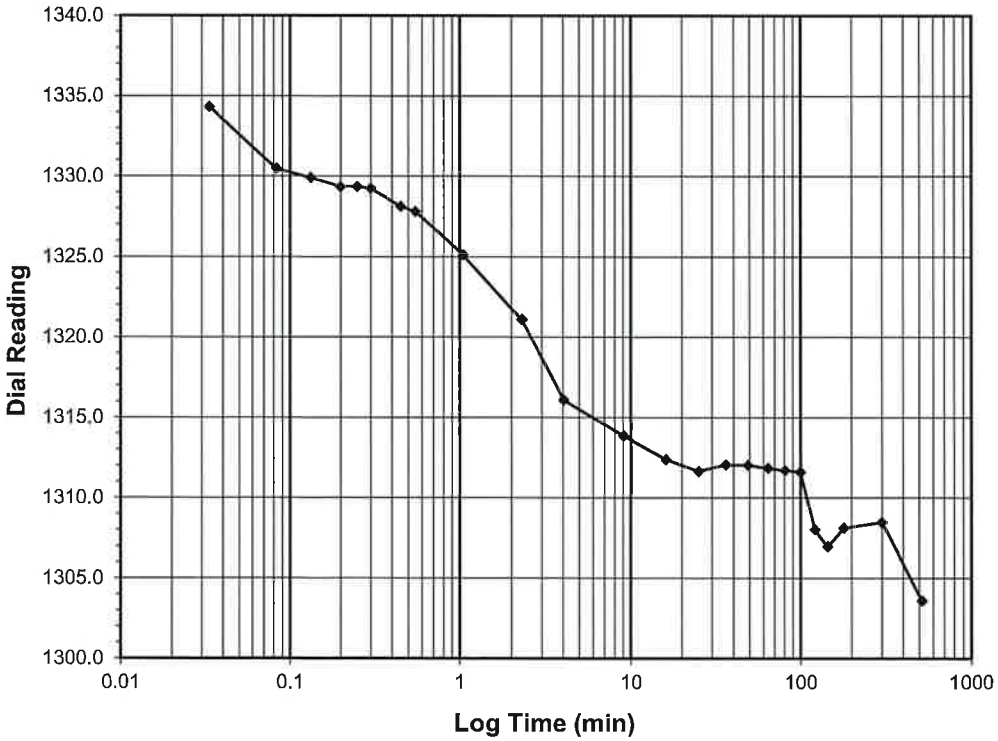
ASTM D 2435-11

Client	Wood PLC	Boring No.	B-20
Client Project	2424-18-135 (PS-902)	Depth (ft)	8.5-10.5
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-001	Visual Description	DARK BROWN CLAYEY SAND

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED





Test Load	**(tsf)**	**8.0-2.0**
Final Reading	**(div)**	**1303.6**
Consolidometer No.		**N144**
1 Division	(in)	0.0001
Start Date		10/9/2018
Start Time		1:15:57

Elapsed Time (min)	Dial Reading (div)
Initial	**1371.7**
0.03	1334.3
0.08	1330.5
0.13	1329.9
0.20	1329.3
0.25	1329.3
0.30	1329.2
0.45	1328.1
0.55	1327.8
1.05	1325.1
2.30	1321.1
4.05	1316.1
9.05	1313.8
16.05	1312.4
25.05	1311.7
36.05	1312.0
49.07	1312.0
64.07	1311.8
81.07	1311.7
100.07	1311.6
121.07	1308.0
144.07	1307.0
180.07	1308.1
300.08	1308.5
520.08	1303.6

Tested By NC *Date* 10/9/2018 *Checked By* DS *Date* 10/16/2018

DCN: CT-24E Date: 3/2/09 Rev: 1 *C:\Users\Test Lab 202\Desktop\Projects Folder\Nashville Projects\2018\N2018-028 - WOOD - PS-902\001\[N2018-028-001-001 D2435.xlsm]FINAL PLOT*

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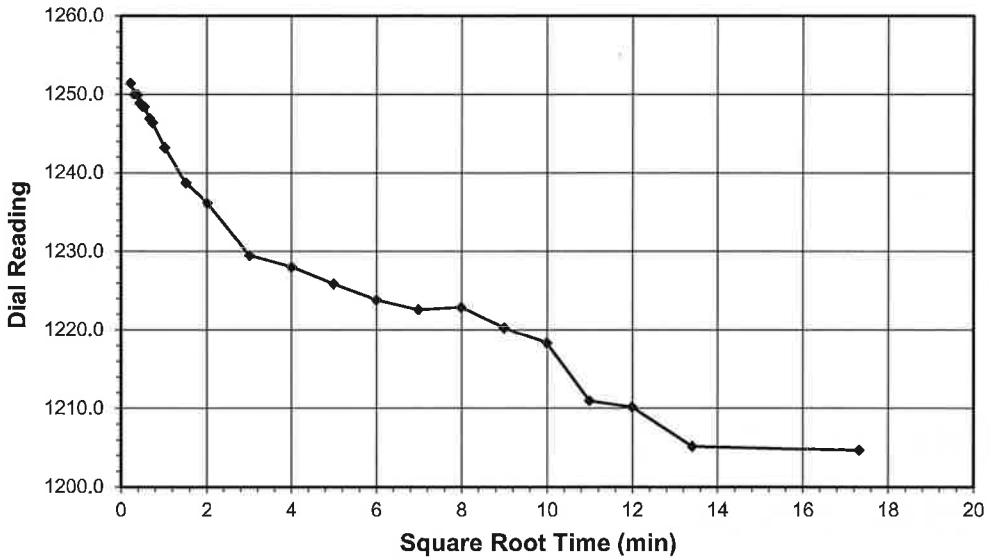
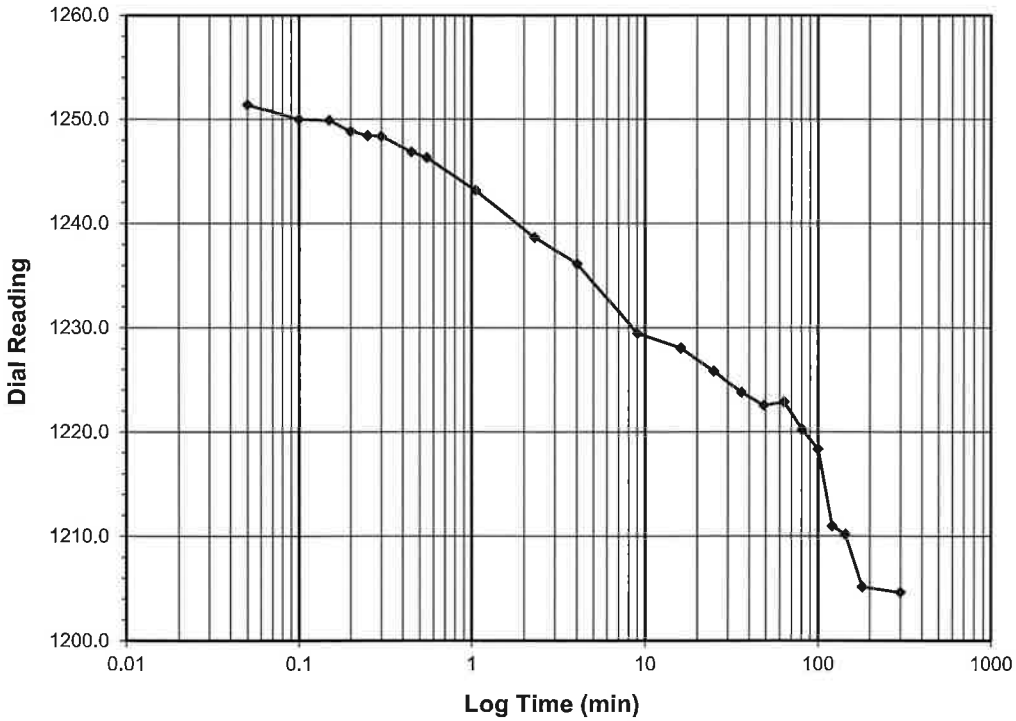
ONE DIMENSIONAL CONSOLIDATION

ASTM D 2435-11

Client	Wood PLC	Boring No.	B-20
Client Project	2424-18-135 (PS-902)	Depth (ft)	8.5-10.5
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-001	Visual Description	DARK BROWN CLAYEY SAND

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED





Test Load	**(tsf)**	**2.0-0.5**
Final Reading	**(div)**	**1204.6**
Consolidometer No.		**N144**
1 Division	(in)	0.0001
Start Date		10/9/2018
Start Time		13:16:15

Elapsed Time (min)	Dial Reading (div)
Initial	**1303.6**
0.05	1251.4
0.10	1250.0
0.15	1249.9
0.20	1248.8
0.25	1248.4
0.30	1248.4
0.45	1246.9
0.55	1246.3
1.05	1243.2
2.30	1238.7
4.05	1236.2
9.05	1229.5
16.05	1228.1
25.05	1225.8
36.05	1223.8
48.85	1222.6
63.82	1222.9
80.82	1220.2
99.82	1218.4
120.82	1211.0
143.82	1210.2
179.82	1205.2
299.83	1204.6

Tested By NC *Date* 10/9/2018 *Checked By* DS *Date* 10/16/2018

DCN: CT-24E Date: 3/2/98 [illegible] *C:\Users\Jen Lab#02\Desktop\Projects Folder\Nashville Projects\2018\N2018-028 - WOOD - PS-902\001\[N2018-028-001-001 D2435.xlsm]FINAL PLOT*

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ATTERBERG LIMITS

ASTM D 4318-17

Client:	Wood PLC	Boring No.:	B-11 OS
Client Reference:	2424-18-135 (PS-902)	Depth (ft):	8.0-10.0
Project No.:	N2018-028-001	Sample No.:	ST-1
Lab ID:	N2018-028-001-002	Color:	Brown
			(MInus No. 40 sieve material)

As Received
Water Content

Tare Number	T16
Wt. of Tare & Wet Sample (g)	365.74
Wt. of Tare & Dry Sample (g)	318.27
Weight of Tare (g)	8.36
Weight of Water (g)	47.47
Weight of Dry Sample (g)	309.91
Water Content (%)	**15.3**

NON - PLASTIC MATERIAL

Tested By RT *Date* 10/3/18 *Checked By* WDS *Date* 10/4/18

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SIEVE ANALYSIS

ASTM D 422-63 (2007)

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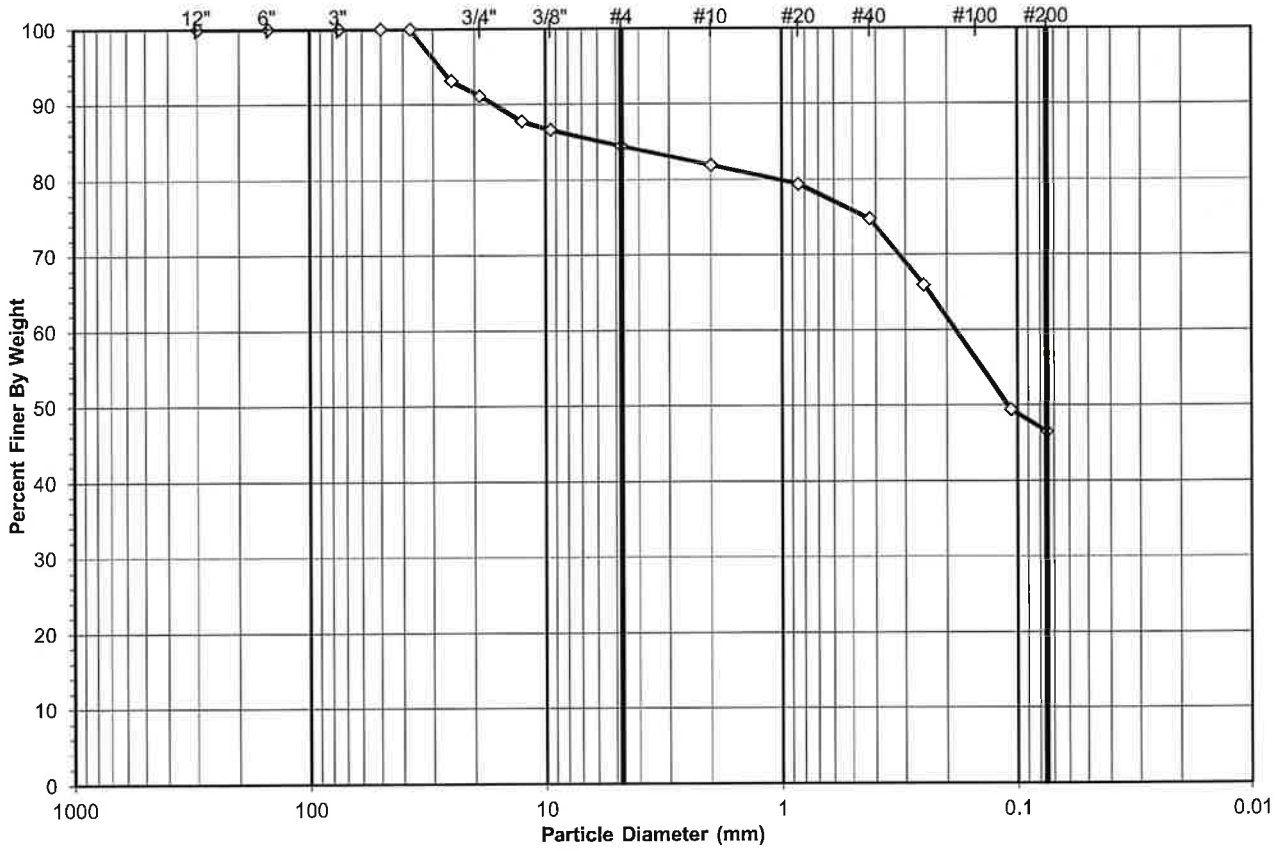
Client:	Wood PLC	Boring No.:	B-11 OS
Client Reference:	2424-18-135 (PS-902)	Depth (ft):	8.0-10.0
Project No.:	N2018-028-001	Sample No.:	ST-1
Lab ID:	N2018-028-001-002	Soil Color:	Brown

	SIEVE ANALYSIS			HYDROMETER	
USCS	cobbles	gravel	sand	silt and clay fraction	
USDA	cobbles	gravel	sand	silt	clay



USCS Summary

Sieve Sizes (mm)		Percentage
Greater Than #4	*Gravel*	15.61
#4 To #200	*Sand*	37.92
Finer Than #200	*Silt & Clay*	46.47

USCS Symbol:
SM, TESTED

USCS Classification:
SILTY SAND WITH GRAVEL
(Non-Plastic Fines)

DCN: CT-S3B, DATE: 7/17/17, REVISION: 9e

S:Excel\Excel QA\Spreadsheets\SieveHydJ.xls

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WASH SIEVE ANALYSIS

ASTM D 422-63 (2007)

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Client:	Wood PLC	Boring No.:	B-11 OS
Client Reference:	2424-18-135 (PS-902)	Depth (ft):	8.0-10.0
Project No.:	N2018-028-001	Sample No.:	ST-1
Lab ID:	N2018-028-001-002	Soil Color:	Brown

Moisture Content of Passing 3/4" Material		Moisture Content of Retained 3/4" Material	
Tare No.:	18	Tare No.:	NA
Wt. of Tare & Wet Sample (g):	1585.66	Weight of Tare & Wet Sample (g):	NA
Wt. of Tare & Dry Sample (g):	1422.70	Weight of Tare & Dry Sample (g):	NA
Weight of Tare (g):	202.31	Weight of Tare (g):	NA
Weight of Water (g):	162.96	Weight of Water (g):	NA
Weight of Dry Soil (g):	1220.39	Weight of Dry Soil (g):	NA
Moisture Content (%):	**13.4**	**Moisture Content (%):**	**0.0**

Wet Weight of -3/4" Sample (g):	NA	Weight of the Dry Sample (g):	1220.39
Dry Weight of - 3/4" Sample (g):	1220.4	Weight of Minus #200 Material (g):	622.20
Wet Weight of +3/4" Sample (g):	118.66	Weight of Plus #200 Material (g):	598.19
Dry Weight of + 3/4" Sample (g):	118.66		
Total Dry Weight of Sample (g):	1339.1		

Sieve Size	Sieve Opening (mm)	Weight of Soil Retained (g)		Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00		0.00	0.00	100.00	**100.00**
6"	150	0.00		0.00	0.00	100.00	**100.00**
3"	75	0.00		0.00	0.00	100.00	**100.00**
2"	50	0.00	(*)	0.00	0.00	100.00	**100.00**
1 1/2"	37.5	0.00		0.00	0.00	100.00	**100.00**
1"	25.0	92.13		6.88	6.88	93.12	**93.12**
3/4"	19.0	26.53		1.98	8.86	91.14	**91.14**
1/2"	12.5	45.46		3.73	3.73	96.27	**87.74**
3/8"	9.50	15.41		1.26	4.99	95.01	**86.59**
#4	4.75	29.55		2.42	7.41	92.59	**84.39**
#10	2.00	33.52		2.75	10.16	89.84	**81.88**
#20	0.85	33.88	(**)	2.78	12.93	87.07	**79.35**
#40	0.425	61.39		5.03	17.96	82.04	**74.77**
#60	0.250	117.70		9.64	27.61	72.39	**65.98**
#140	0.106	222.37		18.22	45.83	54.17	**49.37**
#200	0.075	38.91		3.19	49.02	50.98	**46.47**
Pan	-	622.20		50.98	100.00	-	-

Notes : *(*) The + 3/4" sieve analysis is based on the Total Dry Weight of the Sample*
*(**) The - 3/4" sieve analysis is based on the Weight of the Dry Sample*

Tested By RT Date 10/3/2018 Checked By NC Date 10/4/2018

DCN: CT-S3B, DATE: 7/17/17, REVISION: 9e

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UNCONFINED COMPRESSIVE STRENGTH

ASTM D2166-16 / AASHTO T208-15 (SOP S-30)

Client:	Wood PLC	Boring No.:	B-11 OS
Client Reference:	2424-18-135 (PS-902)	Depth (ft):	9.1-9.6
Project No.:	N2018-028-001	Sample No.:	ST-1
Lab ID:	N2018-028-001-002	Visual:	BROWN SILTY SAND W/ GRAVEL

Tested By NC Date 10/1/2018 Approved By WDS Date 10/2/2018

DCN: CT-S30 Date: 11/09/09 Revision: 4

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UNCONFINED COMPRESSIVE STRENGTH

ASTM D2166-16 / AASHTO T208-15 (SOP S-30)

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Client:	Wood PLC	Boring No.:	B-11 OS
Client Reference:	2424-18-135 (PS-902)	Depth (ft):	9.1-9.6
Project No.:	N2018-028-001	Sample No.:	ST-1
Lab ID:	N2018-028-001-002	Visual:	BROWN SILTY SAND W/ GRAVEL

INITIAL SAMPLE DIMENSIONS				WATER CONTENT AFTER TEST	
Length 1 (in):	5.866	Top Diameter (in):	2.852	Tare No.:	Z18
Length 2 (in):	5.956	Middle Diameter (in):	2.866	Weight of Tare & Wet Sample (g):	1585.66
Length 3 (in):	5.739	Bottom Diameter (in):	2.932	Weight of Tare & Dry Sample (g):	1422.70
Avg. Length (in):	**5.854**	**Avg. Diameter (in):**	**2.883**	Weight of Tare (g):	202.31
		Area (in^2):	**6.529**	Moisture Content (%):	13.35

UNIT WEIGHT			
Weight of Tube & Wet Sample (g):	1386.75	Sample Volume (cm^3):	626.3
Weight of Tube (g):	0.0	Unit Wet Weight (g/cm^3):	2.21
Weight of Wet Sample (g):	1386.75	Unit Wet Weight (pcf):	138.16
Average Diameter (in):	2.88	Moisture Content (%):	13.35
Average Length (in):	5.85	Unit Dry Weight (pcf):	121.88
Average Length (cm):	14.87		

ELECTRONIC DEVICE DEFORMATION (in)	*LOAD (lb)*	*ELAPSED TIME (min)*	*STRAIN (%)*	*STRESS (psi)*
0.000	0.0	0.00	0.000	0.000
0.004	0.6	0.10	0.076	0.093
0.009	0.8	0.20	0.161	0.114
0.017	4.9	0.35	0.291	0.745
0.030	7.5	0.60	0.505	1.135
0.044	9.3	0.88	0.751	1.406
0.063	11.1	1.27	1.073	1.687
0.087	13.2	1.75	1.486	1.994
0.105	14.6	2.12	1.792	2.202
0.129	16.6	2.60	2.206	2.487
0.153	18.2	3.08	2.620	2.719
0.172	19.4	3.45	2.935	2.880
0.214	21.2	4.30	3.655	3.121
0.262	21.7	5.28	4.482	3.175
0.299	21.9	6.00	5.103	3.179
0.335	21.4	6.73	5.723	3.089
0.380	20.4	7.63	6.489	2.917
0.425	20.0	8.55	7.262	2.834
0.455	19.1	9.15	7.776	2.693
0.509	17.8	10.23	8.703	2.482

Notes:

Tested By NC Date 10/1/2018 Input Checked By WDS Date 10/2/2018

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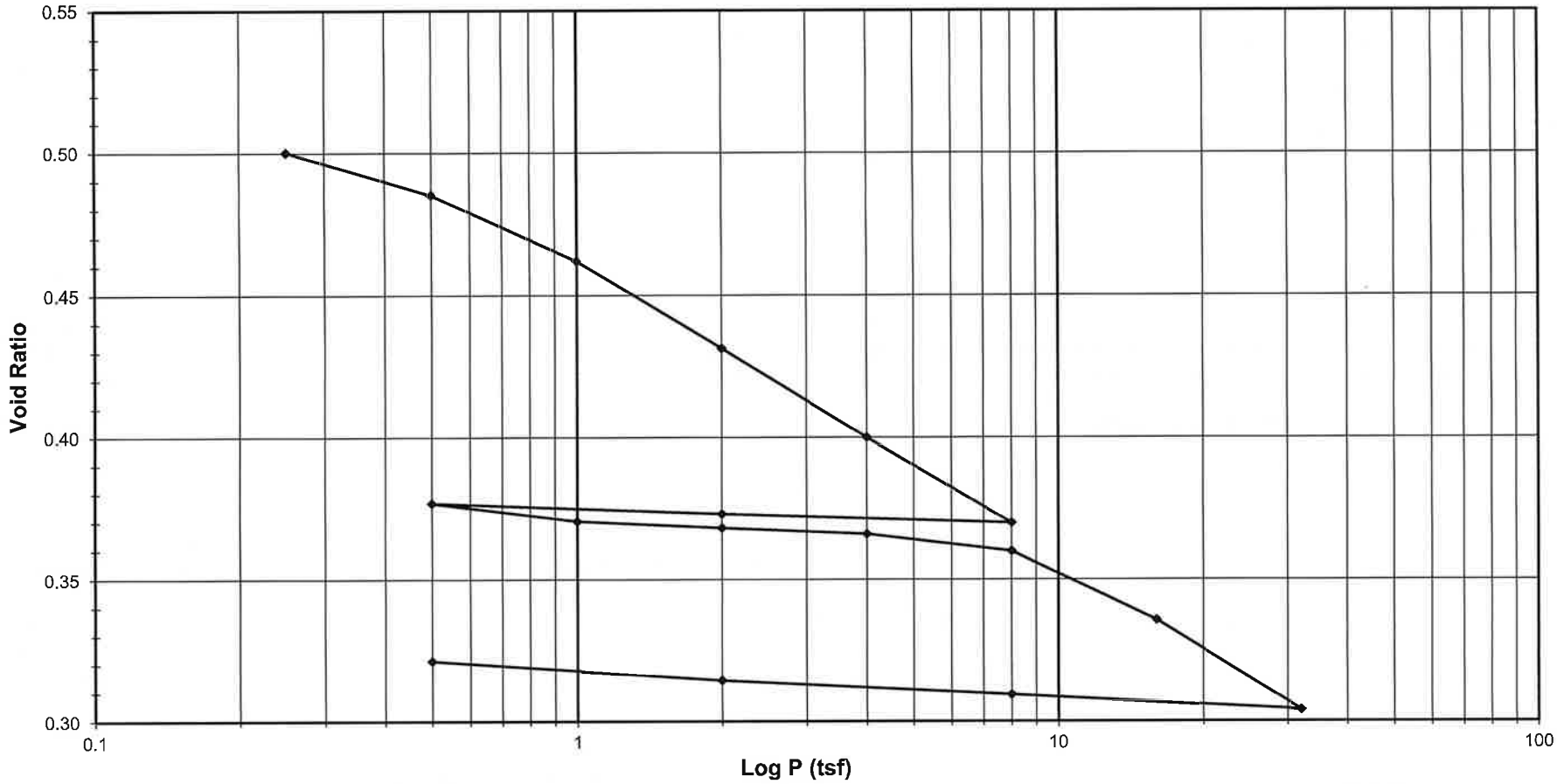
ONE DIMENSIONAL CONSOLIDATION

ASTM D 2435-11

Client	Wood PLC	Boring No.	B-11 OS
Client Reference	2424-18-135 (PS-902)	Depth (ft)	8.0-10.0
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-002	Visual Description	BROWN SILTY SAND WITH GRAVEL

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED



Tested By NC *Date* 10/1/2018 *Approved By* DS *Date* 10/16/2018

DCN: CT-S24F Date: 12/12/05 Revision: 5

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ONE DIMENSIONAL CONSOLIDATION

ASTM D 2435-11

Client	Wood PLC	Boring No.	B-11 OS
Client Reference	2424-18-135 (PS-902)	Depth (ft)	8.0-10.0
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-002	Visual Description	BROWN SILTY SAND WITH GRAVEL

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED
Consolidometer No. N139
1 Division = 0.0001 (in.)

Sample Properties	Initial	Final
Water Content		
Tare Number	T16	11
Wt. Tare & WS (g)	365.74	246.00
Wt. Tare & DS (g)	318.27	229.20
Wt. Water (g)	47.47	16.80
Wt. Tare (g)	8.36	87.88
Wt. DS (g)	309.91	141.32
Water Content (%)	15.32	11.89
Sample Parameters		
Sample Diameter (in)	2.5	2.5
Sample Height (in)	1.0000	0.8653
Sample Volume (cc)	80.44	69.61
Wt. Wet Sample + Ring (g)	380.91	376.03
Wt. of Ring (g)	216.87	216.87
Wt. of Wet Sample (g)	164.04	159.16
Wet Density (pcf)	127.25	142.68
Wet Density (g/cc)	2.04	2.29
Water Content (%)	15.32	11.89
Wt. of Dry Sample (g)	142.25	142.25
Dry Density (pcf)	110.35	127.52
Dry Density (g/cc)	1.77	2.04
Void Ratio	0.5268	0.3212
Saturation (%)	78.51	99.93
Specific Gravity	2.70	*Assumed*

Test Data Summary

Applied Pressure (tsf)	Final Dial Reading (div)	Machine Deflection (div)	Corrected Reading (div)	Height of Sample (mm)	Volume (cc)	Dry Density (g/cc)	Void Ratio
Seating	0	0	0	25.400	80.440	1.76841	**0.52679**
0.25	195.8	21.4	174.4	24.957	79.037	1.79981	**0.50016**
0.5	304.5	31.9	272.7	24.707	78.246	1.81799	**0.48516**
1	473.8	50.3	423.5	24.324	77.033	1.84662	**0.46213**
2	692.1	67.4	624.7	23.813	75.415	1.88625	**0.43141**
4	932.9	103.0	829.9	23.292	73.764	1.92846	**0.40008**
8	1173.5	145.6	1027.8	22.789	72.172	1.97100	**0.36986**
2	1107.7	100.4	1007.2	22.842	72.338	1.96649	**0.37301**
0.5	1041.7	59.3	982.4	22.905	72.537	1.96107	**0.37680**
1	1105.0	81.0	1024.0	22.799	72.203	1.97016	**0.37045**
2	1127.9	88.8	1039.1	22.761	72.081	1.97348	**0.36814**
4	1164.8	110.8	1053.9	22.723	71.962	1.97675	**0.36588**
8	1239.3	146.1	1093.2	22.623	71.646	1.98546	**0.35989**
16	1448.3	196.8	1251.5	22.221	70.373	2.02139	**0.33571**
32	1745.5	287.8	1457.7	21.697	68.714	2.07018	**0.30423**
8	1618.6	195.3	1423.3	21.785	68.991	2.06188	**0.30949**
2	1519.3	128.7	1390.6	21.868	69.254	2.05404	**0.31448**
0.5	1423.2	76.7	1346.5	21.980	69.609	2.04358	**0.32121**

Tested By NC *Date* 10/1/2018 *Input Checked By* DS *Date* 10/16/2018

DCN: CT-S24F Date: 12/12/05 Revision: 5

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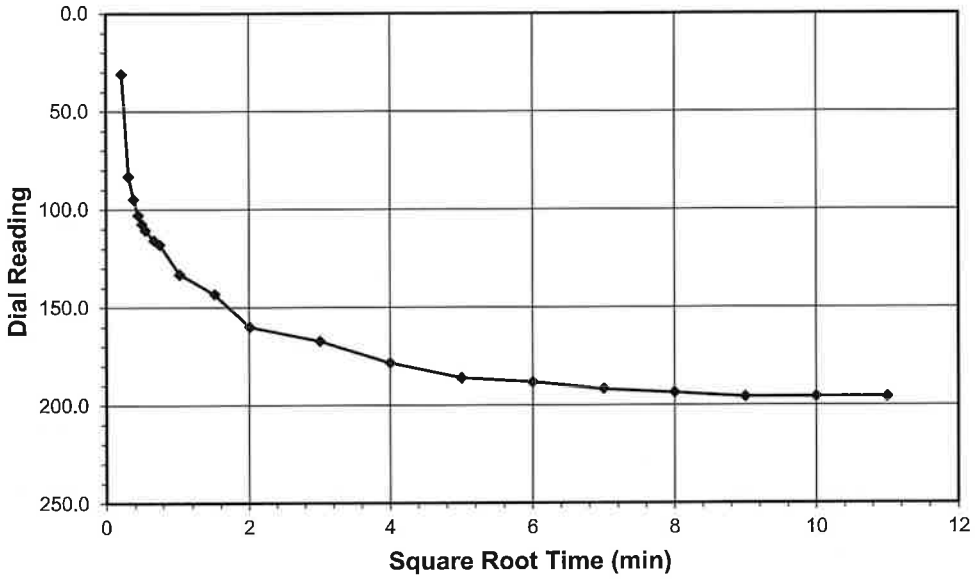
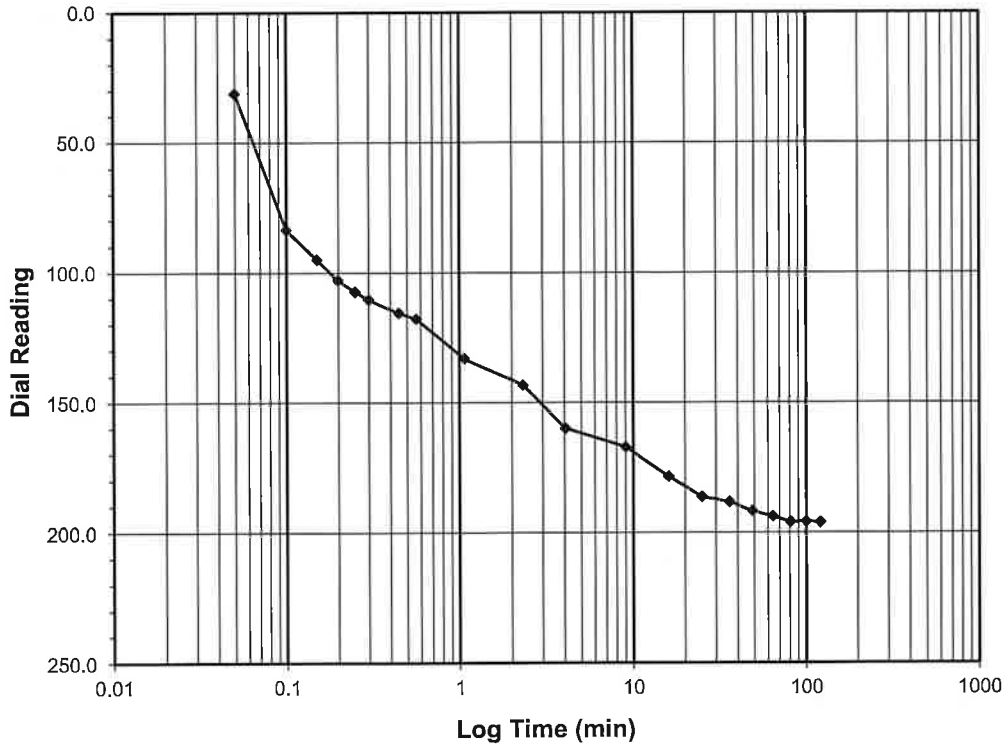
ONE DIMENSIONAL CONSOLIDATION

ASTM D 2435-11

Client	Wood PLC	Boring No.	B-11 OS
Client Project	2424-18-135 (PS-902)	Depth (ft)	8.0-10.0
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-002	Visual Description	BROWN SILTY SAND WITH GRAVEL

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED





Test Load	**(tsf)**	**0.0-0.25**
Final Reading	**(div)**	**195.8**
Consolidometer No.		**N139**
1 Division	(in)	0.0001
Start Date		10/1/2018
Start Time		13:34:54

Elapsed Time (min)	Dial Reading (div)
Initial	**0.0**
0.05	31.1
0.10	83.4
0.15	94.9
0.20	102.9
0.25	107.2
0.30	110.4
0.45	115.5
0.57	117.7
1.07	133.0
2.32	143.1
4.07	159.9
9.07	167.1
16.07	178.4
25.07	186.2
36.07	188.2
49.07	191.7
64.07	193.6
81.07	195.8
100.08	195.6
121.08	195.8

Tested By NC *Date* 10/1/2018 *Checked By* DS *Date* 10/16/2018

DCN: CT-24E Date: 3/28/08 Revision: 2 *C:\Users\Desktop\Projects Folder\Nashville Projects\2018\N2018-028 - WOOD - PS-902\001\[N2018-028-001-002 D2435.xlsm]FINAL PLOT*

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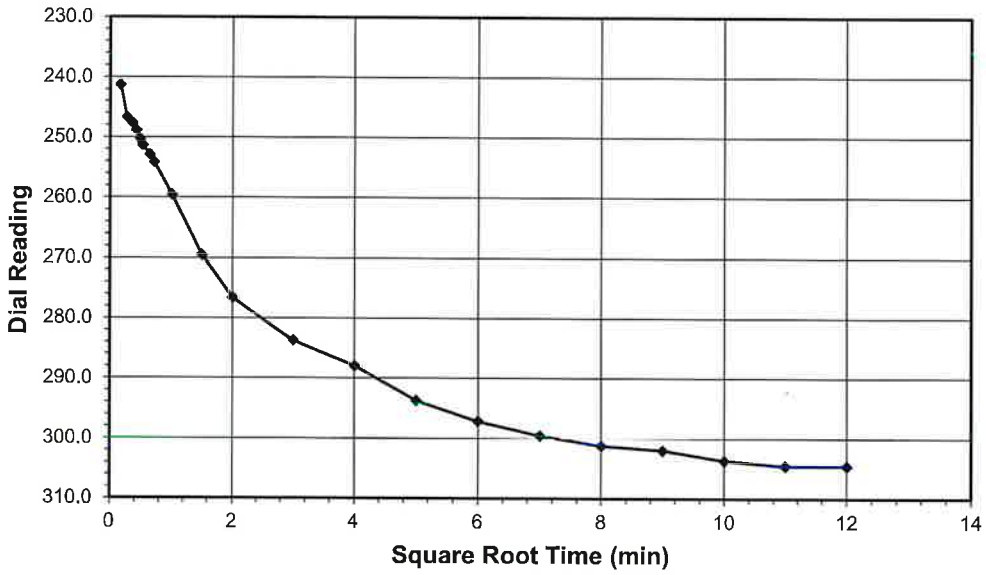
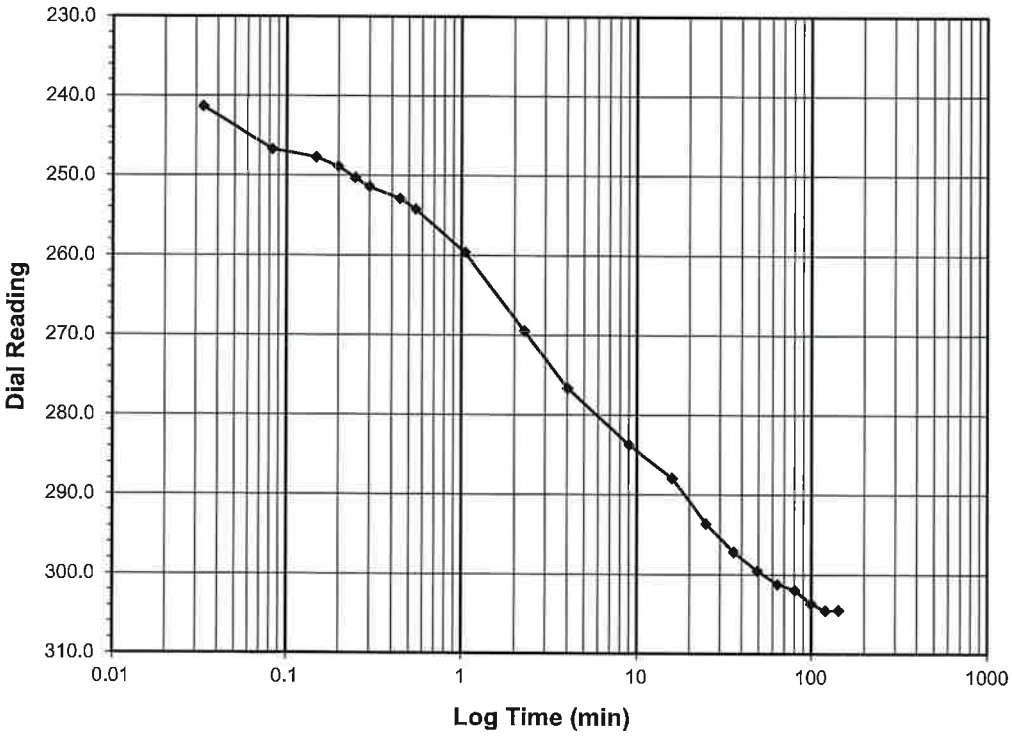
ONE DIMENSIONAL CONSOLIDATION

ASTM D 2435-11

Client	Wood PLC	Boring No.	B-11 OS
Client Project	2424-18-135 (PS-902)	Depth (ft)	8.0-10.0
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-002	Visual Description	BROWN SILTY SAND WITH GRAVEL

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED





Test Load	**(tsf)**	**0.25-0.5**
Final Reading	**(div)**	**304.5**
Consolidometer No.		**N139**
1 Division	(in)	0.0001
Start Date		10/2/2018
Start Time		1:35:22

Elapsed Time (min)	Dial Reading (div)
Initial	**195.8**
0.03	241.3
0.08	246.7
0.15	247.7
0.20	248.9
0.25	250.3
0.30	251.4
0.45	252.9
0.55	254.2
1.05	259.6
2.30	269.5
4.05	276.7
9.07	283.8
16.07	287.9
25.07	293.7
36.07	297.1
49.07	299.5
64.07	301.2
81.07	302.0
100.07	303.7
121.07	304.5
144.07	304.5

Tested By NC *Date* 10/2/2018 *Checked By* DS *Date* 10/16/2018

DCN: CT-24E Date: 3/2/98 C:\Users\Lab#02\Desktop\Projects Folder\Nashville Projects\2018\N2018-028 - WOOD - PS-902\001\[N2018-028-001-002 D2435.xlsm]FINAL PLOT

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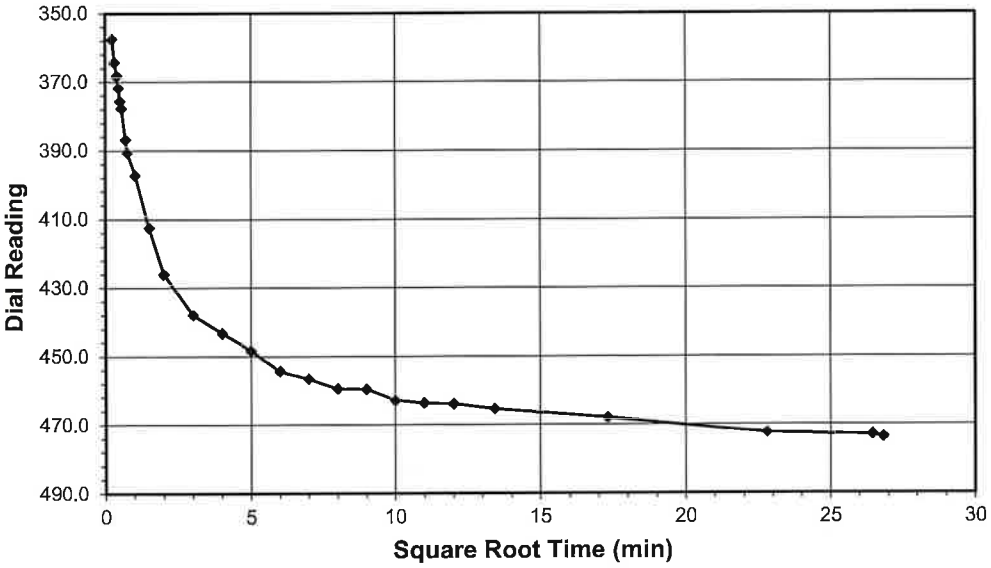
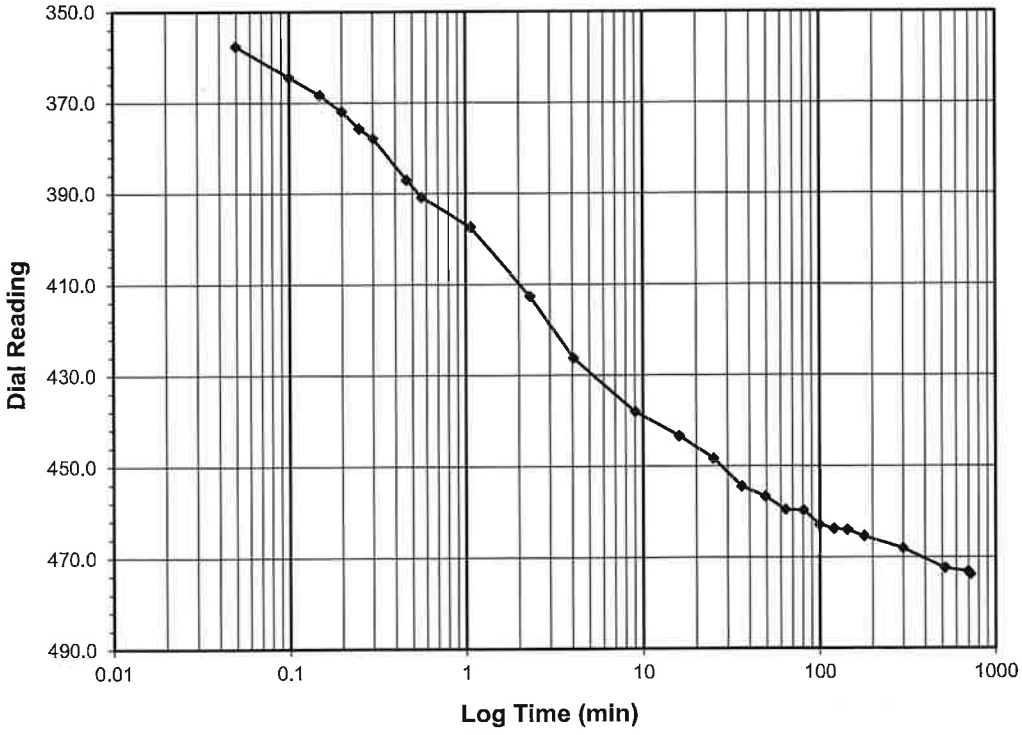
ONE DIMENSIONAL CONSOLIDATION

ASTM D 2435-11

Client	Wood PLC	Boring No.	B-11 OS
Client Project	2424-18-135 (PS-902)	Depth (ft)	8.0-10.0
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-002	Visual Description	BROWN SILTY SAND WITH GRAVEL

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED





Test Load	**(tsf)**	**0.5-1.0**
Final Reading	**(div)**	**473.8**
Consolidometer No.		**N139**
1 Division	(in)	0.0001
Start Date		10/2/2018
Start Time		13:35:51

Elapsed Time (min)	Dial Reading (div)
Initial	**304.5**
0.05	357.6
0.10	364.5
0.15	368.4
0.20	371.9
0.25	375.7
0.30	377.9
0.47	387.0
0.57	390.8
1.07	397.4
2.32	412.6
4.07	426.1
9.07	438.0
16.07	443.4
25.07	448.3
36.07	454.5
49.07	456.7
64.07	459.6
81.07	459.7
100.07	462.9
121.07	463.8
144.07	464.0
180.07	465.5
300.07	468.0
520.07	472.4
700.07	473.1
720.12	473.8

Tested By NC *Date* 10/2/2018 *Checked By* DS *Date* 10/16/2018

DCN: CT-24E Date: 3/2/98 C:\Users\Lab#02\Desktop\Projects Folder\Nashville Projects\2018\N2018-028 - WOOD - PS-902\001\[N2018-028-001-002 D2435.xlsm]FINAL PLOT

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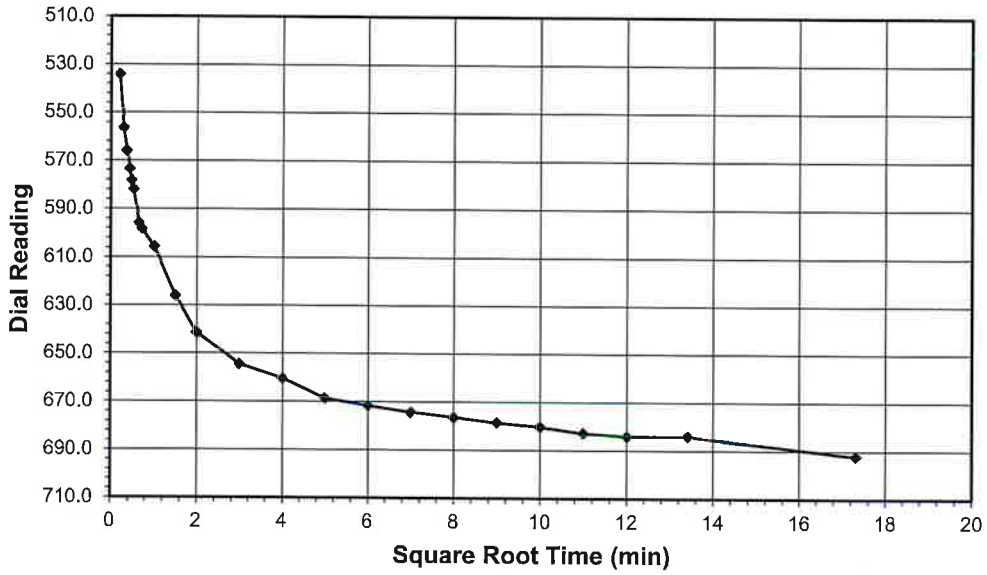
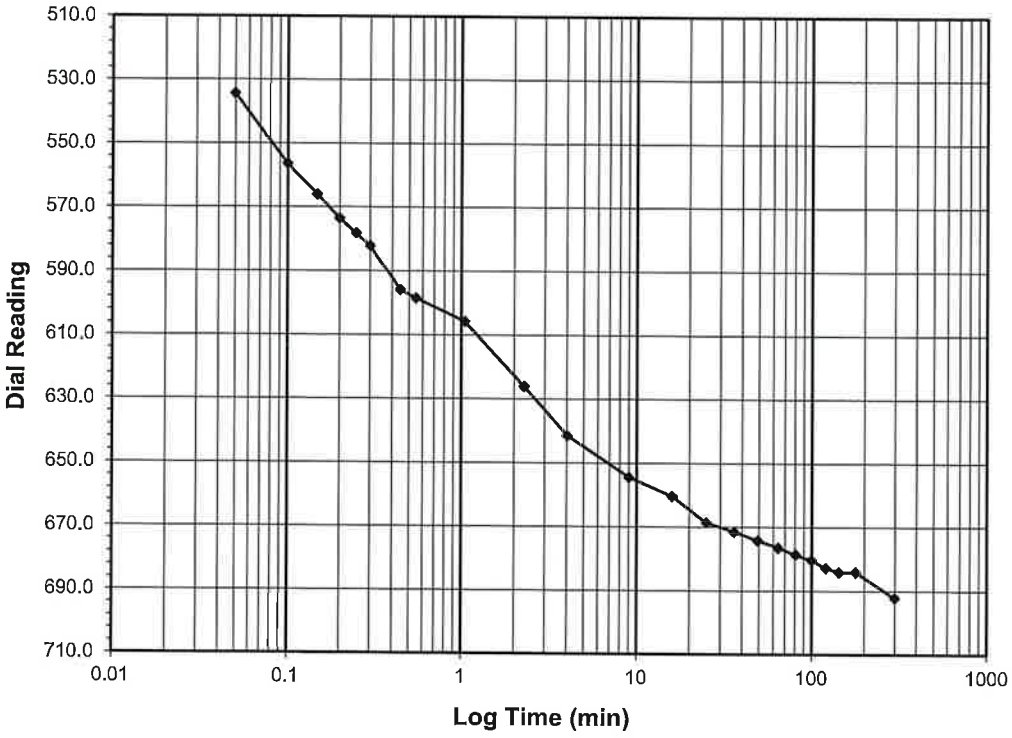
ONE DIMENSIONAL CONSOLIDATION

ASTM D 2435-11

Client	Wood PLC	Boring No.	B-11 OS
Client Project	2424-18-135 (PS-902)	Depth (ft)	8.0-10.0
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-002	Visual Description	BROWN SILTY SAND WITH GRAVEL

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED





Test Load	**(tsf)**	**1.0-2.0**
Final Reading	**(div)**	**692.1**
Consolidometer No.		**N139**
1 Division	(in)	0.0001
Start Date		10/3/2018
Start Time		1:35:58

Elapsed Time (min)	Dial Reading (div)
Initial	**473.8**
0.05	534.3
0.10	556.4
0.15	566.1
0.20	573.5
0.25	578.2
0.30	582.1
0.45	595.9
0.55	598.4
1.05	605.7
2.30	626.1
4.05	641.5
9.05	654.4
16.05	660.3
25.05	668.6
36.07	671.5
49.07	674.2
64.07	676.4
81.08	678.5
100.08	680.2
121.08	682.7
144.08	684.0
180.08	684.0
300.10	692.1

Tested By NC *Date* 10/3/2018 *Checked By* DS *Date* 10/16/2018

DCN: CT-24E Date: 3/2/98 C:\Users\Test2Lab#02\Desktop\Projects Folder\Nashville Projects\2018\N2018-028 - WOOD - PS-902\001\[N2018-028-001-002 D2435.xlsm]FINAL PLOT

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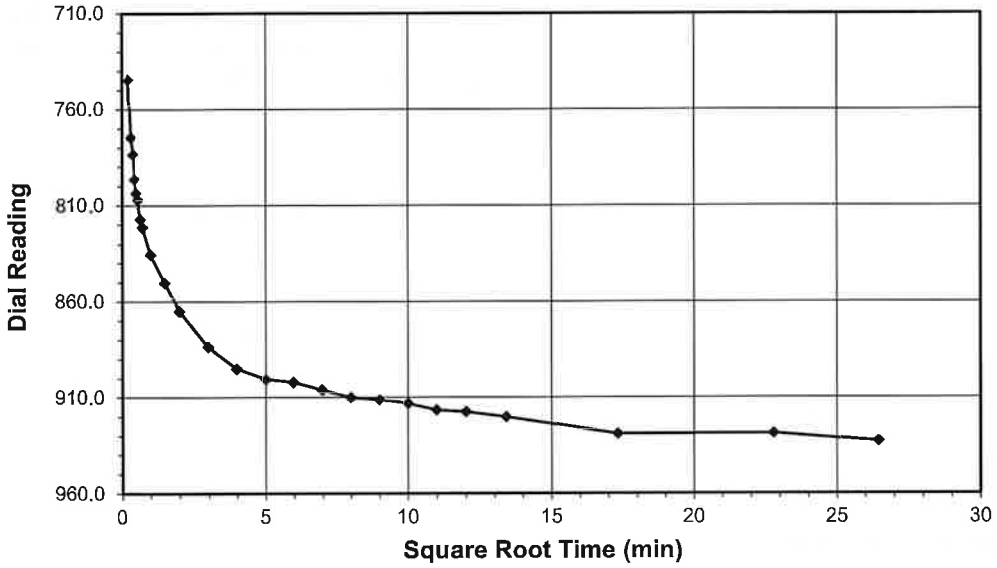
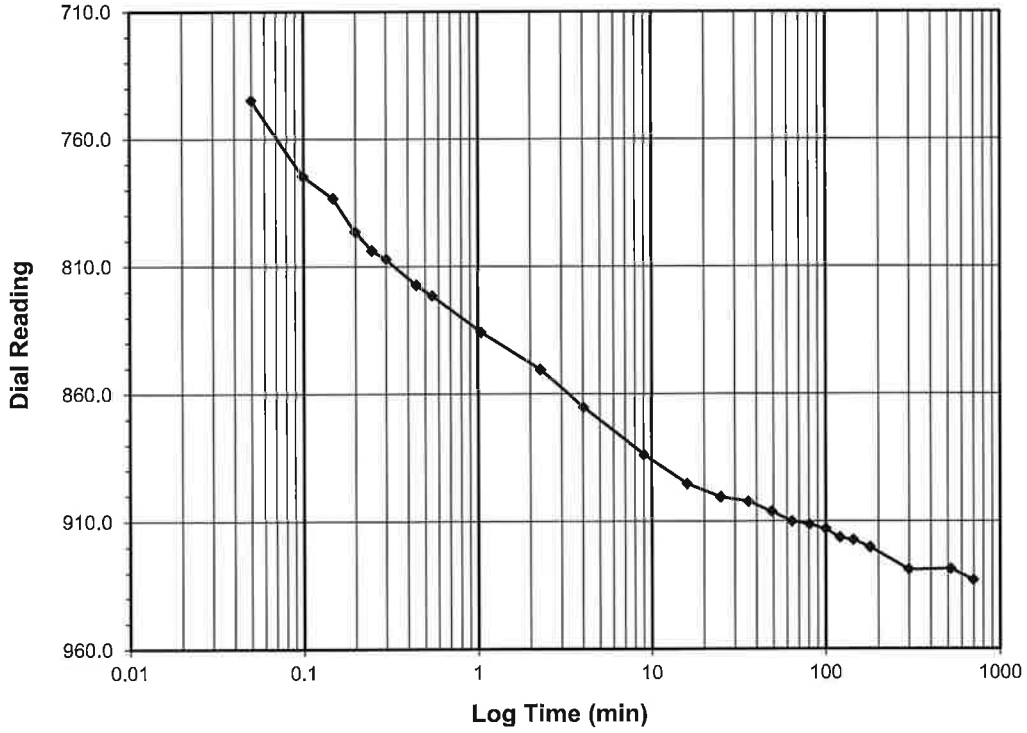
ASTM D 2435-11

Client	Wood PLC	Boring No.	B-11 OS
Client Project	2424-18-135 (PS-902)	Depth (ft)	8.0-10.0
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-002	Visual Description	BROWN SILTY SAND WITH GRAVEL

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED





Test Load	**(tsf)**	**2.0-4.0**
Final Reading	**(div)**	**932.9**
Consolidometer No.		**N139**
1 Division	(in)	0.0001
Start Date		10/3/2018
Start Time		13:36:28

Elapsed Time (min)	Dial Reading (div)
Initial	**692.1**
0.05	744.7
0.10	774.6
0.15	783.4
0.20	796.5
0.25	803.7
0.30	807.0
0.45	817.3
0.55	821.4
1.05	835.8
2.30	850.4
4.05	865.2
9.05	883.9
16.05	895.3
25.05	900.5
36.05	902.3
49.05	906.2
64.05	910.0
81.05	911.2
100.05	913.0
121.05	916.4
144.05	917.3
180.07	920.1
300.07	928.9
520.08	928.6
700.08	932.9

Tested By NC *Date* 10/3/2018 *Checked By* DS *Date* 10/16/2018

DCN: CT-24E Date: 3/2/98 C:\Users\Test Lab#02\Desktop\Projects Folder\Nashville Projects\2018\N2018-028 - WOOD - PS-902\001\[N2018-028-001-002 D2435.xlsm]FINAL PLOT

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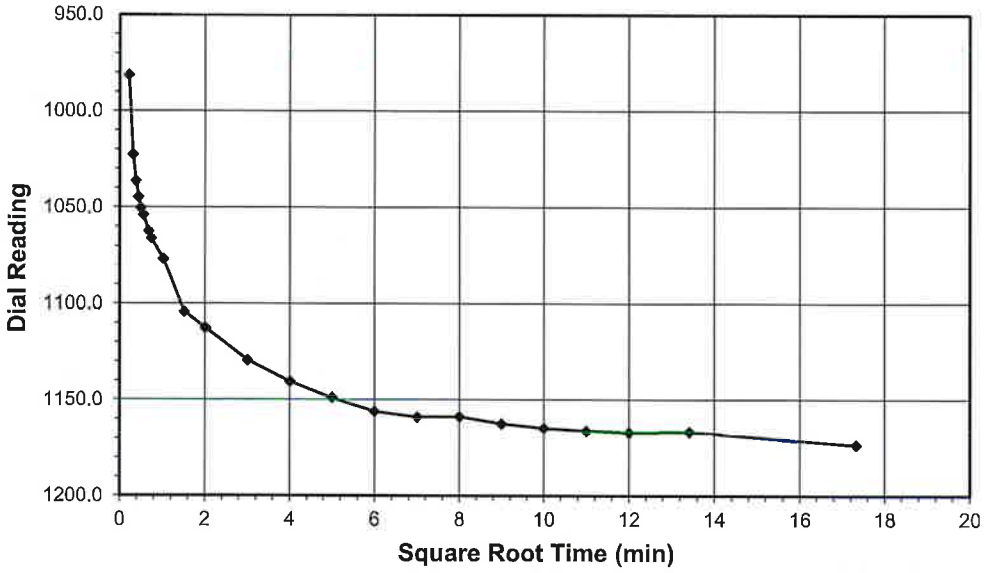
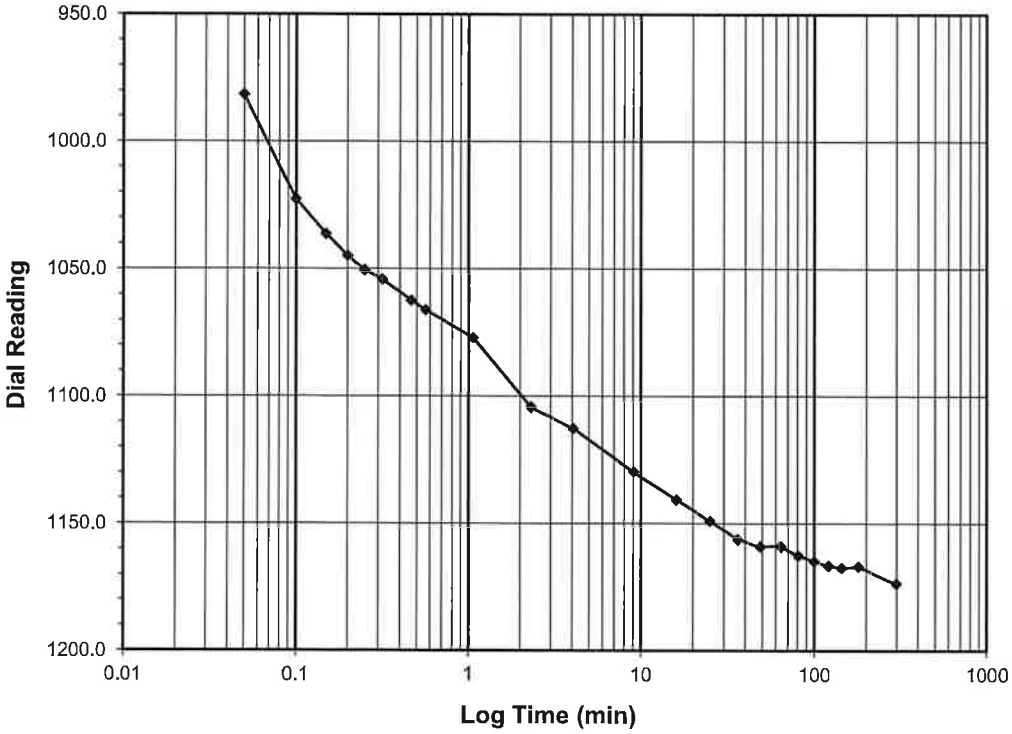
ASTM D 2435-11

Client	Wood PLC	Boring No.	B-11 OS
Client Project	2424-18-135 (PS-902)	Depth (ft)	8.0-10.0
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-002	Visual Description	BROWN SILTY SAND WITH GRAVEL

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED





Test Load	**(tsf)**	**4.0-8.0**
Final Reading	**(div)**	**1173.5**
Consolidometer No.		**N139**
1 Division	(in)	0.0001
Start Date		10/4/2018
Start Time		1:36:44

Elapsed Time (min)	Dial Reading (div)
Initial	**932.9**
0.05	981.4
0.10	1022.6
0.15	1036.4
0.20	1044.8
0.25	1050.3
0.32	1054.0
0.47	1062.3
0.57	1066.1
1.07	1076.9
2.32	1104.2
4.07	1112.6
9.07	1129.5
16.07	1140.5
25.07	1148.9
36.07	1156.1
49.07	1159.0
64.08	1158.7
81.08	1162.5
100.08	1164.7
121.08	1166.1
144.08	1167.0
180.08	1166.6
300.05	1173.5

Tested By NC *Date* 10/4/2018 *Checked By* DS *Date* 10/16/2018

DCN: CT-24E Date: 3/2/98 C:\Users\Test Lab#02\Desktop\Projects Folder\Nashville Projects\2018\N2018-028 - WOOD - PS-902\001\[N2018-028-001-002 D2435.xlsm]FINAL PLOT

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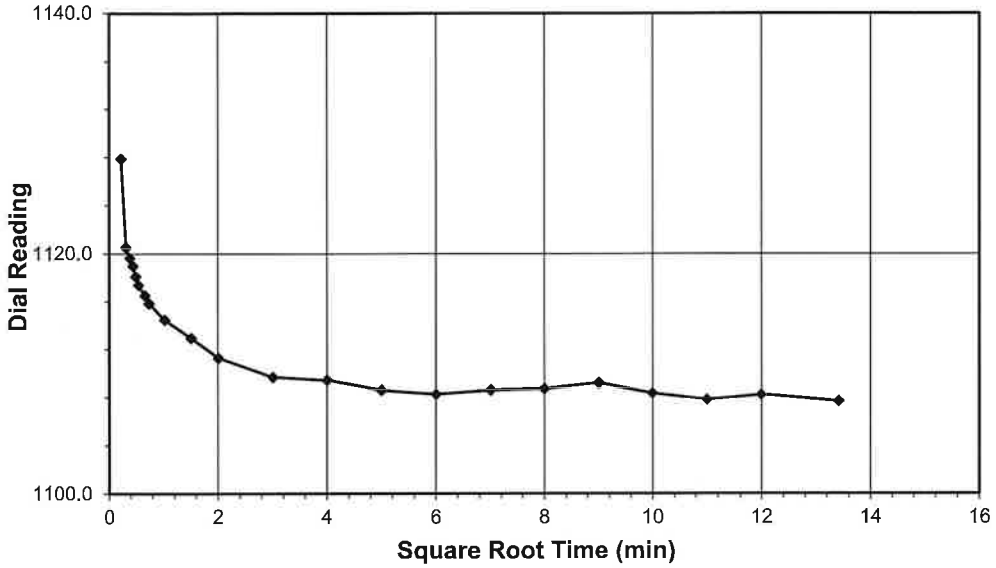
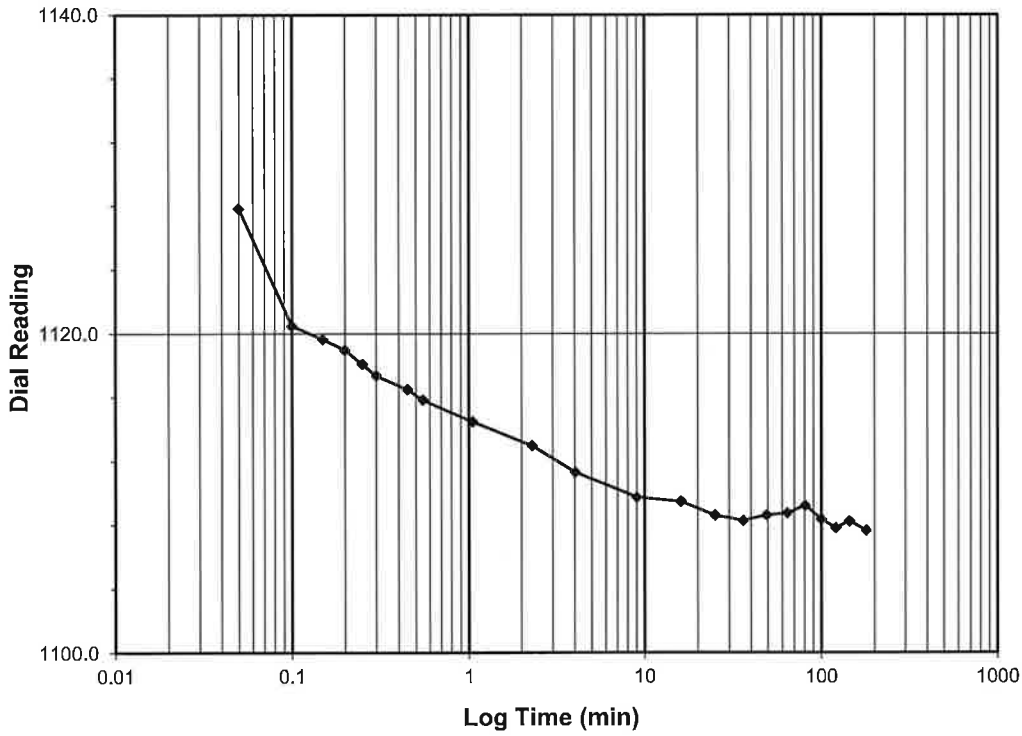
ASTM D 2435-11

Client	Wood PLC	Boring No.	B-11 OS
Client Project	2424-18-135 (PS-902)	Depth (ft)	8.0-10.0
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-002	Visual Description	BROWN SILTY SAND WITH GRAVEL

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED





Test Load	**(tsf)**	**8.0-2.0**
Final Reading	**(div)**	**1107.7**
Consolidometer No.		**N139**
1 Division	(in)	0.0001
Start Date		10/4/2018
Start Time		13:37:13

Elapsed Time (min)	Dial Reading (div)
Initial	**1173.5**
0.05	1127.8
0.10	1120.5
0.15	1119.7
0.20	1119.0
0.25	1118.1
0.30	1117.4
0.45	1116.5
0.55	1115.9
1.05	1114.5
2.30	1113.0
4.05	1111.3
9.05	1109.7
16.07	1109.5
25.07	1108.6
36.07	1108.3
49.07	1108.6
64.07	1108.7
81.07	1109.2
100.05	1108.4
121.05	1107.8
144.05	1108.2
180.05	1107.7

Tested By NC *Date* 10/4/2018 *Checked By* DS *Date* 10/16/2018

DCN: CT-24E Date: 3/2/98 C:\Users\Lab#02\Desktop\Projects Folder\Nashville Projects\2018\N2018-028 - WOOD - PS-902\001\[N2018-028-001-002 D2435.xlsm]FINAL PLOT

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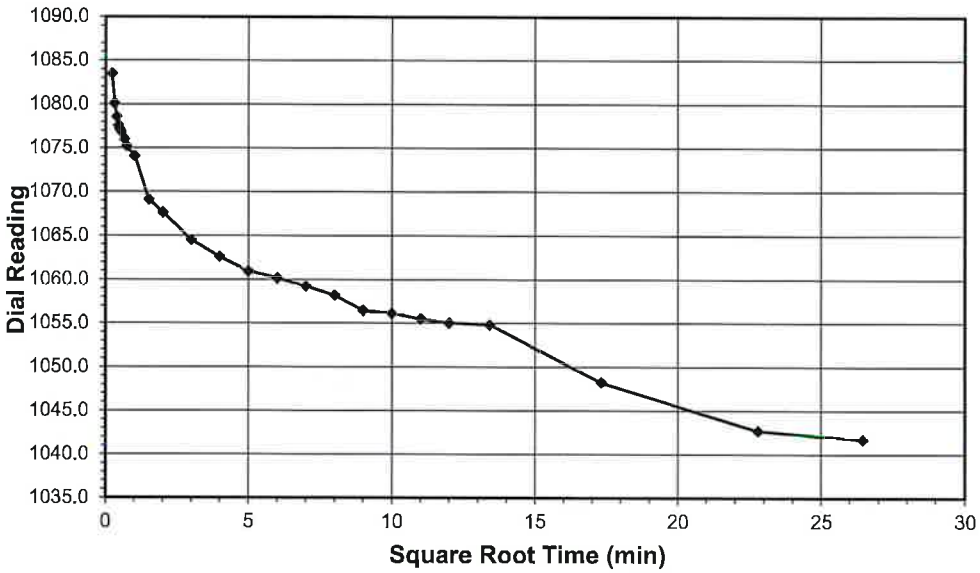
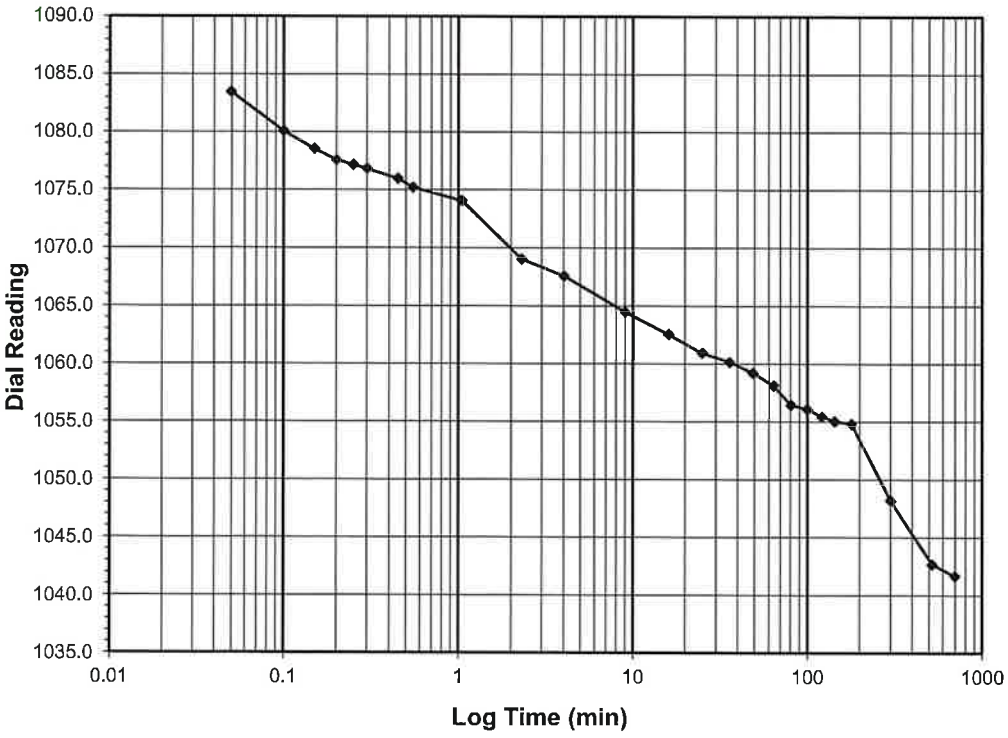
ASTM D 2435-11

Client	Wood PLC	Boring No.	B-11 OS
Client Project	2424-18-135 (PS-902)	Depth (ft)	8.0-10.0
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-002	Visual Description	BROWN SILTY SAND WITH GRAVEL

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED





Test Load	**(tsf)**	**2.0-0.5**
Final Reading	**(div)**	**1041.7**
Consolidometer No.		**N139**
1 Division	(in)	0.0001
Start Date		10/5/2018
Start Time		1:37:36

Elapsed Time (min)	Dial Reading (div)
Initial	**1107.7**
0.05	1083.5
0.10	1080.1
0.15	1078.6
0.20	1077.6
0.25	1077.2
0.30	1076.8
0.45	1076.0
0.55	1075.2
1.05	1074.1
2.30	1069.1
4.05	1067.6
9.05	1064.5
16.05	1062.6
25.05	1061.0
36.05	1060.2
49.07	1059.2
64.07	1058.2
81.07	1056.4
100.07	1056.1
121.07	1055.5
144.07	1055.0
180.07	1054.8
300.07	1048.2
520.07	1042.7
700.07	1041.7

Tested By NC *Date* 10/5/2018 *Checked By* DS *Date* 10/16/2018

DCN: CT-24E Date: 3/2/96 C:\Users\Test Lab#02\Desktop\Projects Folder\Nashville Projects\2018\N2018-028 - WOOD - PS-902\001\[N2018-028-001-002 D2435.xlsm]FINAL PLOT

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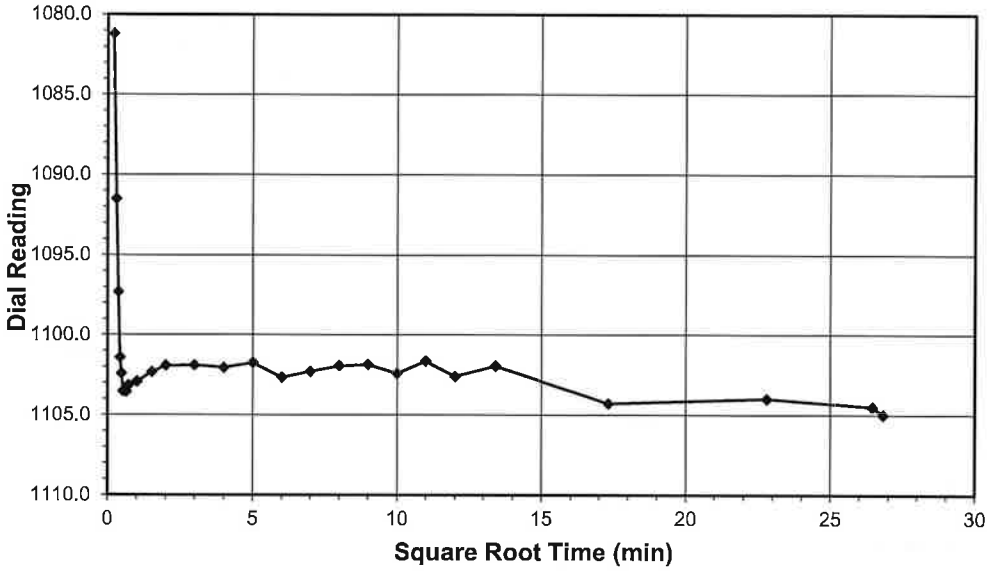
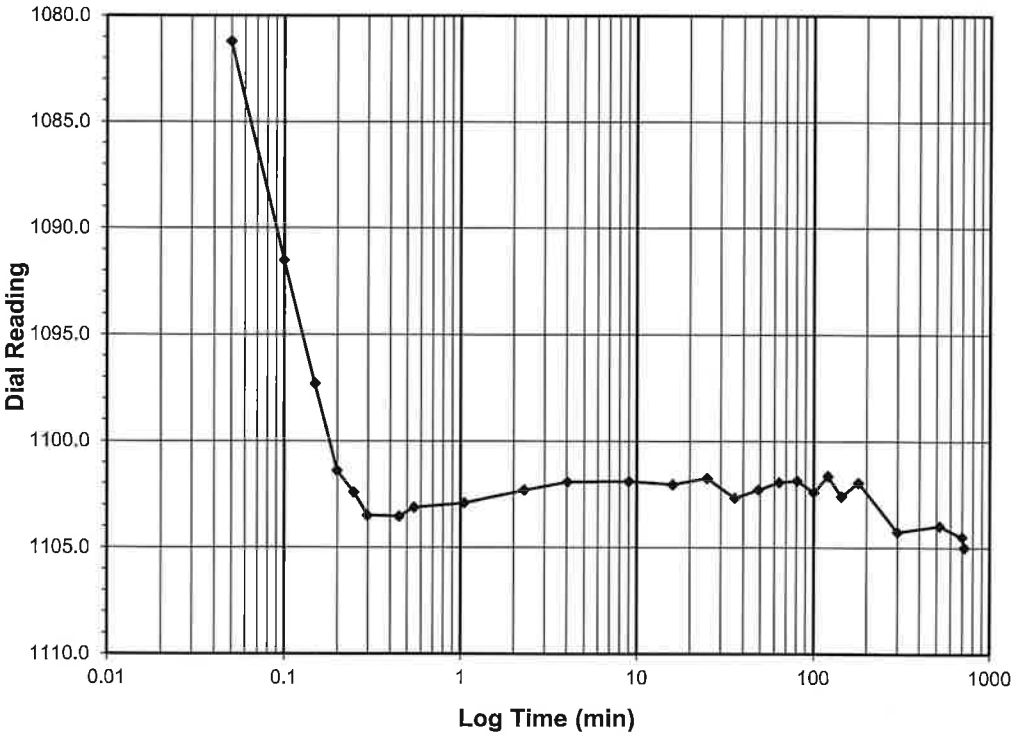
ONE DIMENSIONAL CONSOLIDATION

ASTM D 2435-11

Client	Wood PLC	Boring No.	B-11 OS
Client Project	2424-18-135 (PS-902)	Depth (ft)	8.0-10.0
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-002	Visual Description	BROWN SILTY SAND WITH GRAVEL

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED





Test Load	**(tsf)**	**0.5-1.0**
Final Reading	**(div)**	**1105.0**
Consolidometer No.		**N139**
1 Division	(in)	0.0001
Start Date		10/5/2018
Start Time		13:23:13

Elapsed Time (min)	Dial Reading (div)
Initial	**1041.7**
0.05	1081.2
0.10	1091.5
0.15	1097.3
0.20	1101.4
0.25	1102.4
0.30	1103.5
0.45	1103.5
0.55	1103.1
1.05	1102.9
2.30	1102.3
4.05	1101.9
9.05	1101.9
16.07	1102.0
25.07	1101.7
36.07	1102.7
49.07	1102.3
64.07	1101.9
81.07	1101.9
100.07	1102.4
121.07	1101.6
144.07	1102.6
180.07	1101.9
300.07	1104.3
520.05	1104.0
700.03	1104.5
720.13	1105.0

Tested By NC *Date* 10/5/2018 *Checked By* DS *Date* 10/16/2018

DCN: CT-24E Date: 3/2/96 C:\Users\Test Lab#02\Desktop\Projects Folder\Nashville Projects\2018\N2018-028 - WOOD - PS-902\001\[N2018-028-001-002 D2435.xlsm]FINAL PLOT

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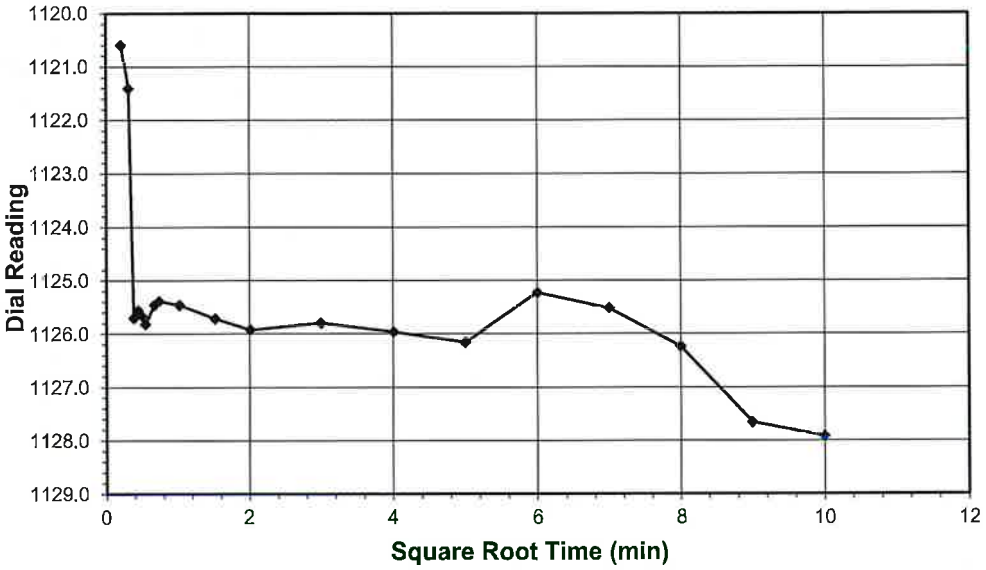
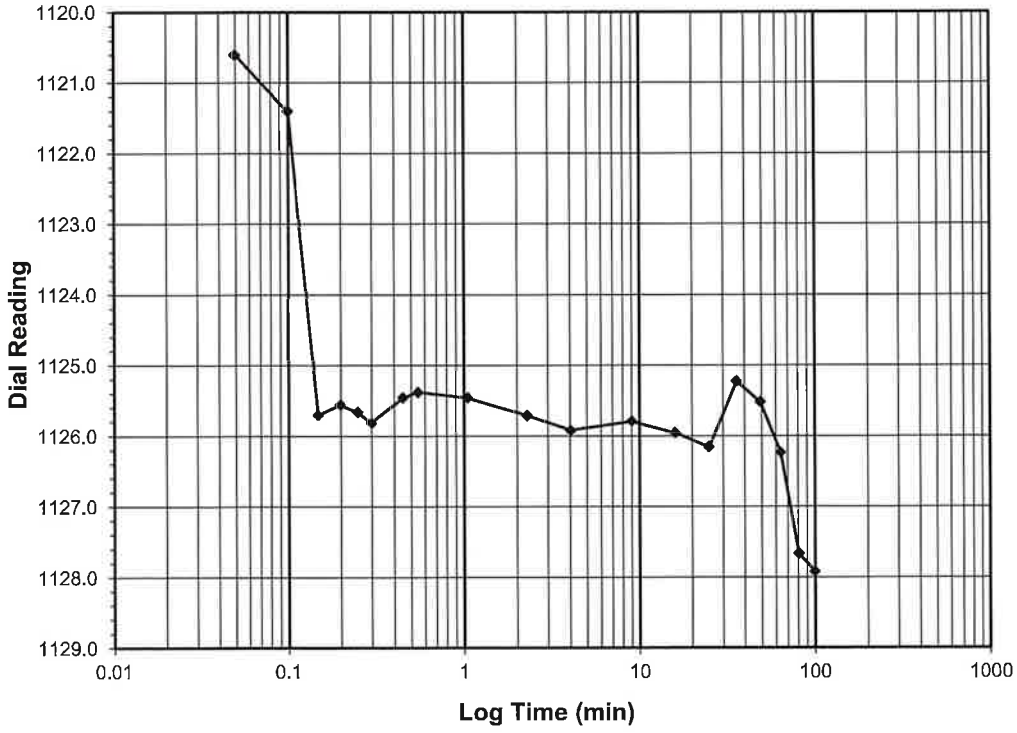
ASTM D 2435-11

Client	Wood PLC	Boring No.	B-11 OS
Client Project	2424-18-135 (PS-902)	Depth (ft)	8.0-10.0
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-002	Visual Description	BROWN SILTY SAND WITH GRAVEL

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED





Test Load	**(tsf)**	**1.0-2.0**
Final Reading	**(div)**	**1127.9**
Consolidometer No.		**N139**
1 Division	(in)	0.0001
Start Date		10/6/2018
Start Time		1:23:21

Elapsed Time (min)	Dial Reading (div)
Initial	**1105.0**
0.05	1120.6
0.10	1121.4
0.15	1125.7
0.20	1125.6
0.25	1125.7
0.30	1125.8
0.45	1125.5
0.55	1125.4
1.05	1125.5
2.30	1125.7
4.05	1125.9
9.05	1125.8
16.07	1126.0
25.07	1126.2
36.07	1125.2
49.07	1125.5
64.07	1126.2
81.07	1127.7
100.07	1127.9

Tested By NC *Date* 10/6/2018 *Checked By* DS *Date* 10/16/2018

DCN: CT-24E Date: 3/2/98 C:\Users\Lab#02\Desktop\Projects Folder\Nashville Projects\2018\N2018-028 - WOOD - PS-902\001\[N2018-028-001-002 D2435.xlsm]FINAL PLOT

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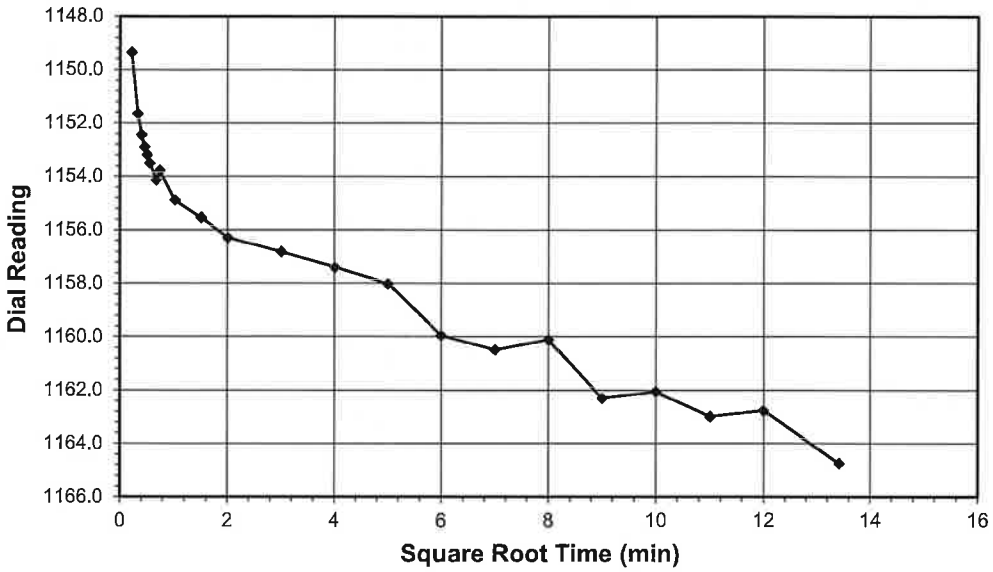
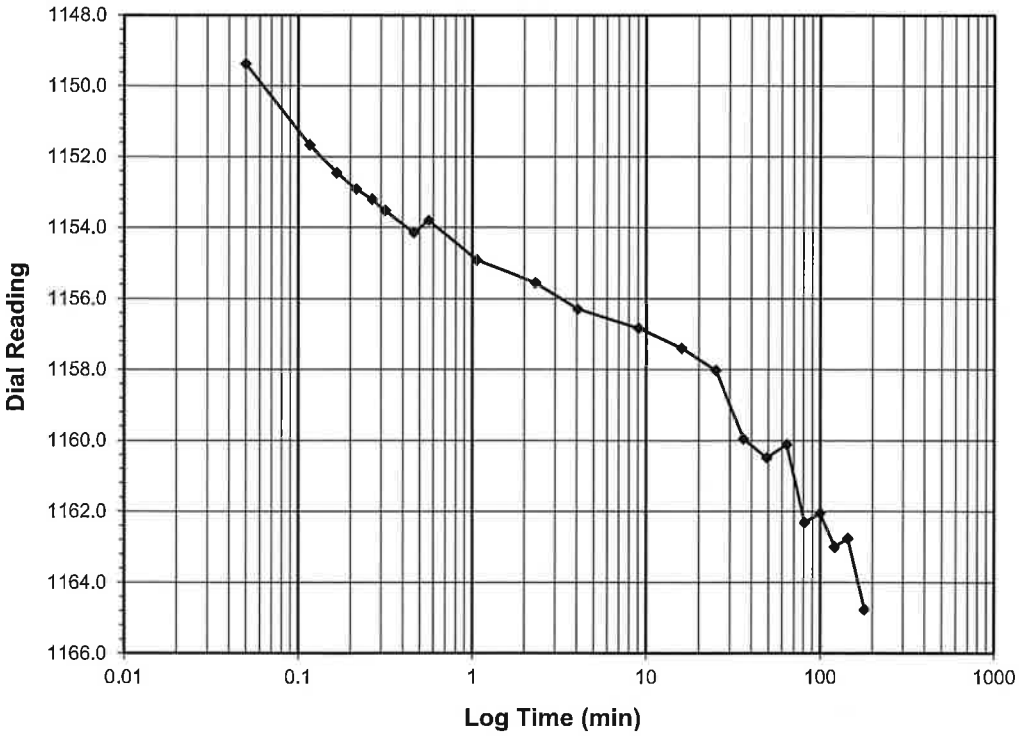
ONE DIMENSIONAL CONSOLIDATION

ASTM D 2435-11

Client	Wood PLC	Boring No.	B-11 OS
Client Project	2424-18-135 (PS-902)	Depth (ft)	8.0-10.0
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-002	Visual Description	BROWN SILTY SAND WITH GRAVEL

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED





Test Load	**(tsf)**	**2.0-4.0**
Final Reading	**(div)**	**1164.8**
Consolidometer No.		**N139**
1 Division	(in)	0.0001
Start Date		10/6/2018
Start Time		13:23:48

Elapsed Time (min)	Dial Reading (div)
Initial	**1127.9**
0.05	1149.4
0.12	1151.7
0.17	1152.5
0.22	1152.9
0.27	1153.2
0.32	1153.5
0.47	1154.1
0.57	1153.8
1.07	1154.9
2.32	1155.6
4.07	1156.3
9.07	1156.8
16.07	1157.4
25.07	1158.0
36.07	1160.0
49.07	1160.5
64.07	1160.1
81.07	1162.3
100.07	1162.0
121.08	1163.0
144.08	1162.8
180.08	1164.8

Tested By NC *Date* 10/6/2018 *Checked By* DS *Date* 10/16/2018

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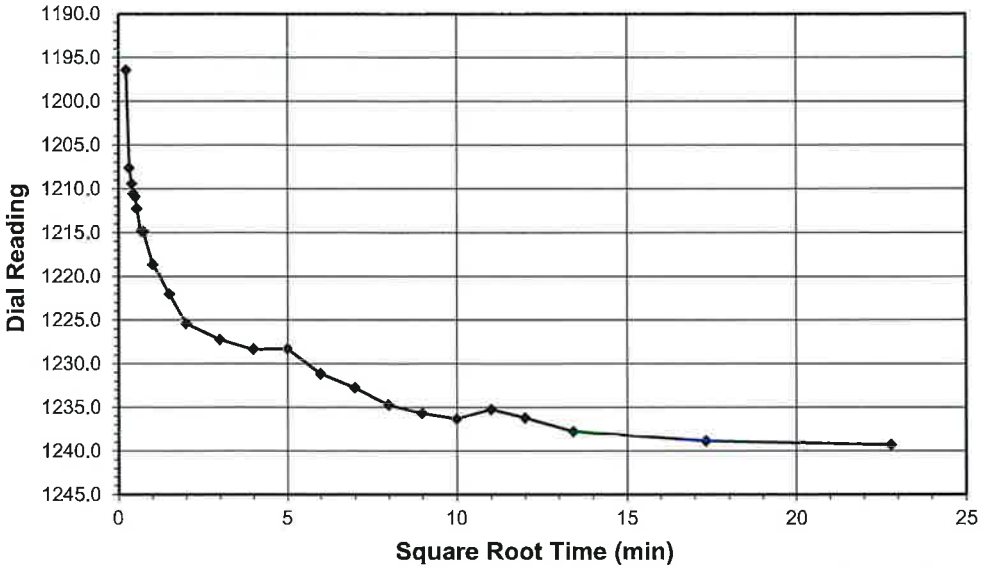
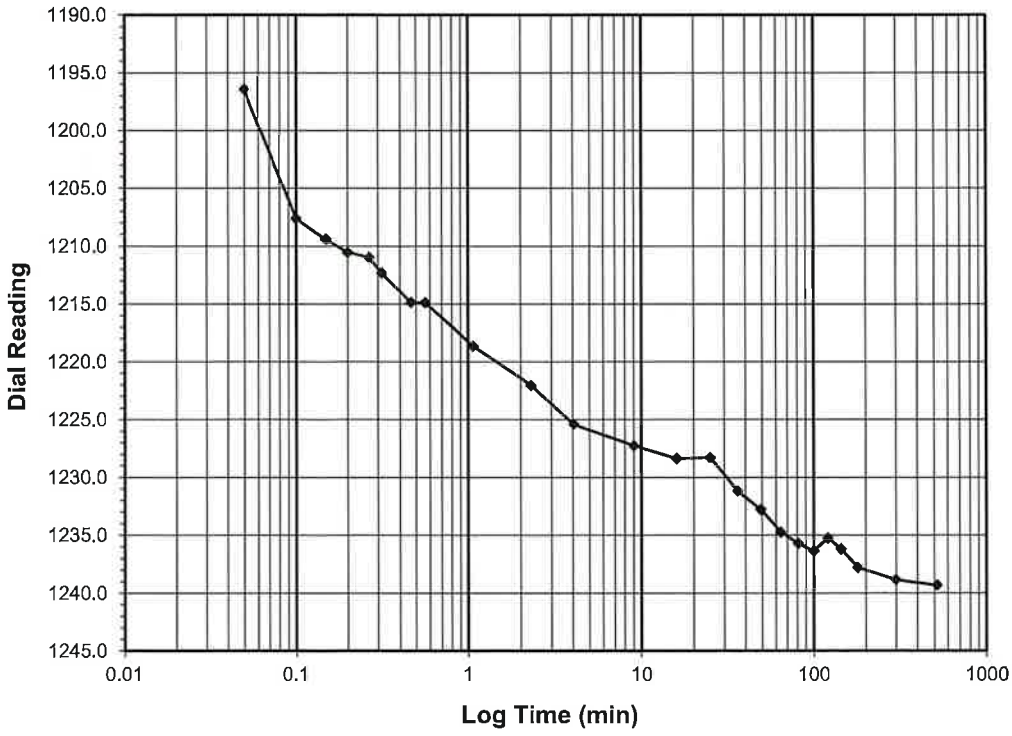
ONE DIMENSIONAL CONSOLIDATION

ASTM D 2435-11

Client	Wood PLC	Boring No.	B-11 OS
Client Project	2424-18-135 (PS-902)	Depth (ft)	8.0-10.0
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-002	Visual Description	BROWN SILTY SAND WITH GRAVEL

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED





Test Load	**(tsf)**	**4.0-8.0**
Final Reading	**(div)**	**1239.3**
Consolidometer No.		**N139**
1 Division	(in)	0.0001
Start Date		10/7/2018
Start Time		1:24:09

Elapsed Time (min)	Dial Reading (div)
Initial	**1164.8**
0.05	1196.4
0.10	1207.6
0.15	1209.4
0.20	1210.5
0.27	1210.9
0.32	1212.3
0.47	1214.8
0.57	1214.9
1.07	1218.6
2.32	1222.0
4.07	1225.4
9.07	1227.2
16.07	1228.4
25.07	1228.3
36.07	1231.2
49.07	1232.8
64.07	1234.7
81.07	1235.7
100.07	1236.3
121.07	1235.2
144.07	1236.2
180.07	1237.8
300.07	1238.8
520.10	1239.3

Tested By NC *Date* 10/7/2018 *Checked By* DS *Date* 10/16/2018

DCN: CT-24E Date: 3/2/98 C:\Users\Test Lab#02\Desktop\Projects Folder\Nashville Projects\2018\N2018-028 - WOOD - PS-902\001\[N2018-028-001-002 D2435.xlsm]FINAL PLOT

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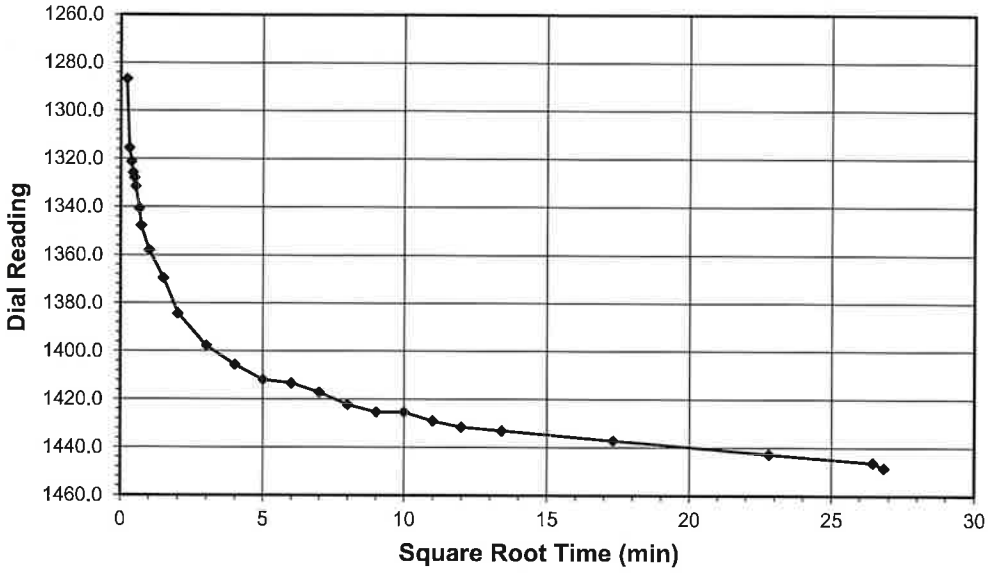
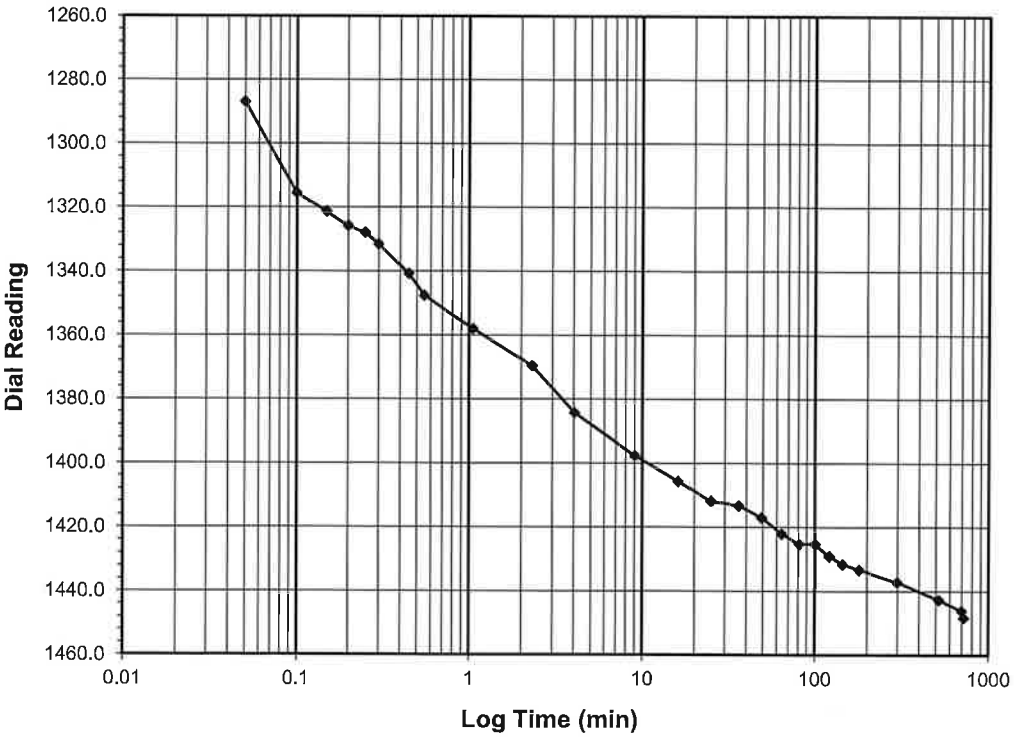
ONE DIMENSIONAL CONSOLIDATION

ASTM D 2435-11

Client	Wood PLC	Boring No.	B-11 OS
Client Project	2424-18-135 (PS-902)	Depth (ft)	8.0-10.0
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-002	Visual Description	BROWN SILTY SAND WITH GRAVEL

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED





Test Load	**(tsf)**	**8.0-16.0**
Final Reading	**(div)**	**1448.3**
Consolidometer No.		**N139**
1 Division	(in)	0.0001
Start Date		10/7/2018
Start Time		13:24:23

Elapsed Time (min)	Dial Reading (div)
Initial	**1239.3**
0.05	1286.8
0.10	1315.5
0.15	1321.2
0.20	1325.8
0.25	1327.9
0.30	1331.5
0.45	1340.7
0.55	1347.6
1.05	1357.9
2.30	1369.4
4.05	1384.2
9.05	1397.6
16.05	1405.5
25.05	1411.8
36.05	1413.2
49.05	1417.0
64.05	1422.1
81.05	1425.1
100.07	1425.2
121.07	1428.9
144.07	1431.4
180.05	1433.0
300.05	1437.1
520.07	1442.6
700.05	1446.1
720.35	1448.3

Tested By NC *Date* 10/7/2018 *Checked By* DS *Date* 10/16/2018

DCN: CT-24E Date: 3/2/96 C:\Users\Terrain2 Lab#02\Desktop\Projects Folder\Nashville Projects\2018\N2018-028 - WOOD - PS-902\001\[N2018-028-001-002 D2435.xlsm]FINAL PLOT

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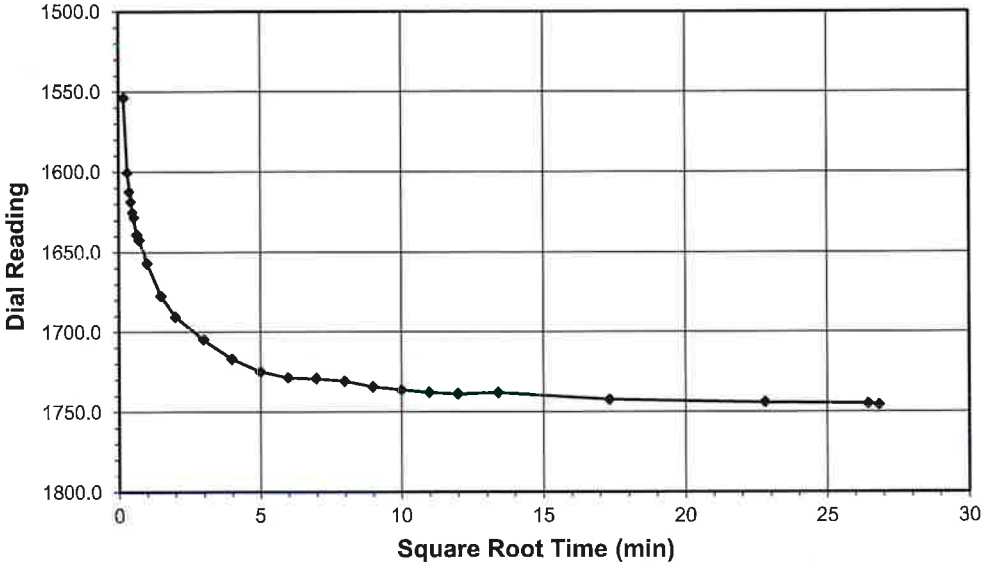
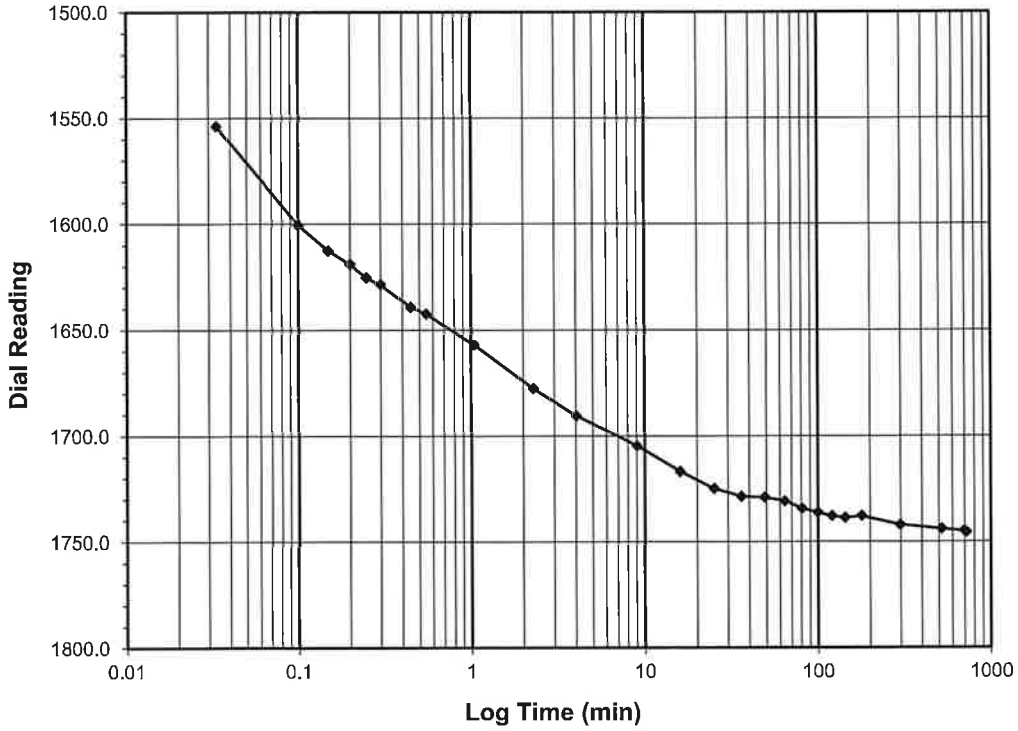
ONE DIMENSIONAL CONSOLIDATION

ASTM D 2435-11

Client	Wood PLC	Boring No.	B-11 OS
Client Project	2424-18-135 (PS-902)	Depth (ft)	8.0-10.0
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-002	Visual Description	BROWN SILTY SAND WITH GRAVEL

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED





Test Load	**(tsf)**	**16.0-32.0**
Final Reading	**(div)**	**1745.5**
Consolidometer No.		**N139**
1 Division	(in)	0.0001
Start Date		10/8/2018
Start Time		1:24:44

Elapsed Time (min)	Dial Reading (div)
Initial	**1448.3**
0.03	1553.7
0.10	1600.4
0.15	1612.4
0.20	1618.7
0.25	1625.2
0.30	1628.4
0.45	1639.1
0.55	1642.3
1.05	1657.0
2.30	1677.5
4.05	1690.5
9.05	1704.6
16.05	1716.8
25.05	1724.8
36.05	1728.5
49.05	1729.1
64.05	1730.8
81.05	1734.3
100.05	1736.2
121.05	1737.8
144.05	1738.7
180.05	1737.8
300.05	1742.1
520.05	1743.9
700.08	1744.8
720.30	1745.5

Tested By NC *Date* 10/8/2018 *Checked By* DS *Date* 10/16/2018

DCN: CT-24E Date: 3/2/98 C:\Users\Lab#02\Desktop\Projects Folder\Nashville Projects\2018\N2018-028 - WOOD - PS-902\001\[N2018-028-001-002 D2435.xlsm]FINAL PLOT

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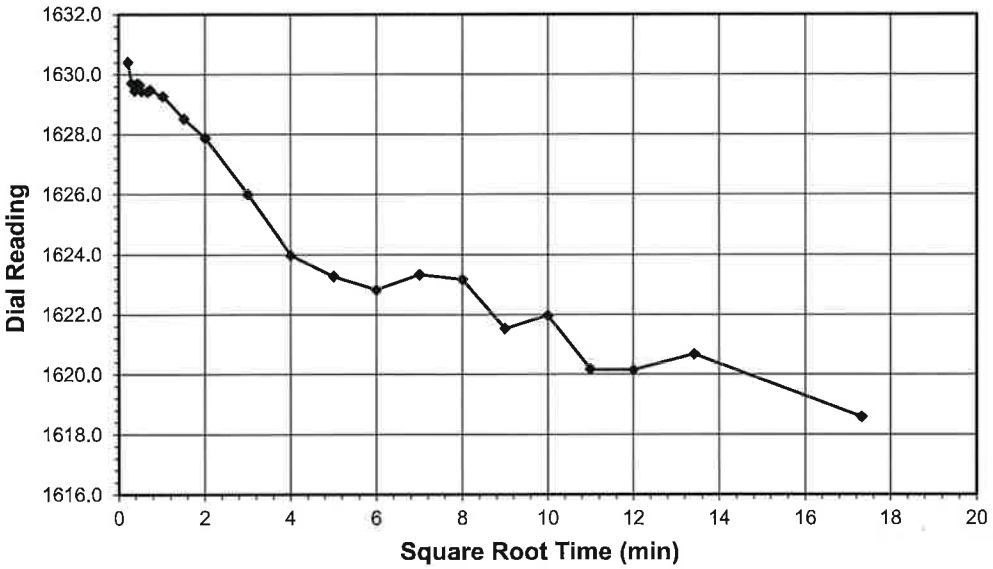
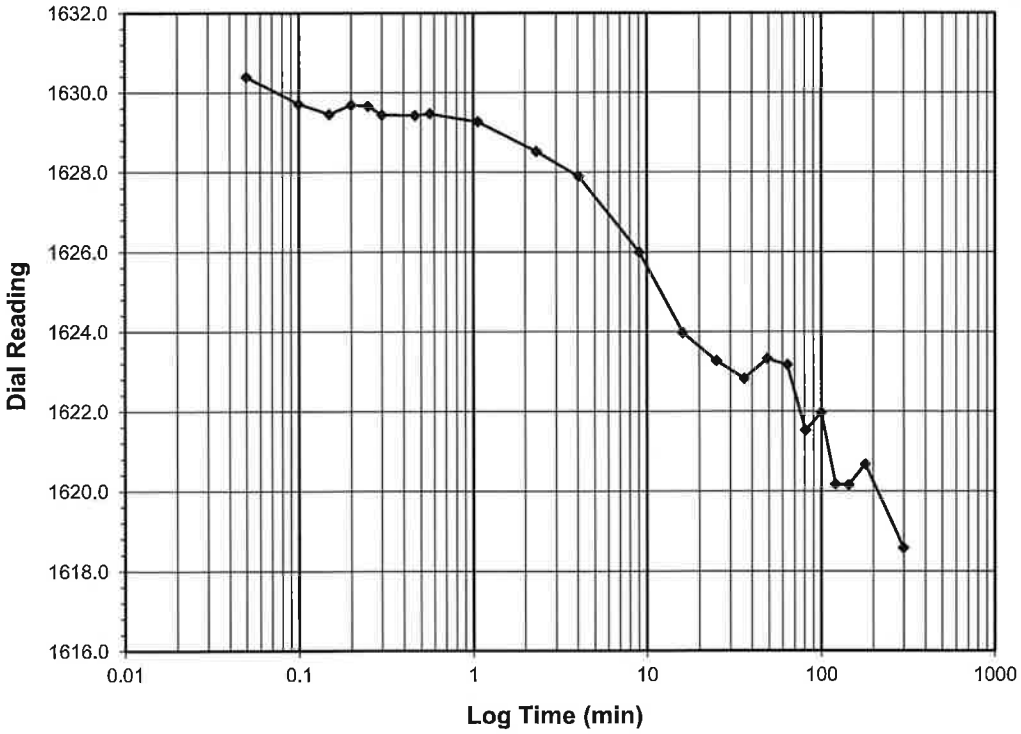
ONE DIMENSIONAL CONSOLIDATION

ASTM D 2435-11

Client	Wood PLC	Boring No.	B-11 OS
Client Project	2424-18-135 (PS-902)	Depth (ft)	8.0-10.0
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-002	Visual Description	BROWN SILTY SAND WITH GRAVEL

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED





Test Load	**(tsf)**	**32.0-8.0**
Final Reading	**(div)**	**1618.6**
Consolidometer No.		**N139**
1 Division	(in)	0.0001
Start Date		10/8/2018
Start Time		13:25:03

Elapsed Time (min)	Dial Reading (div)
Initial	**1745.5**
0.05	1630.4
0.10	1629.7
0.15	1629.5
0.20	1629.7
0.25	1629.7
0.30	1629.4
0.47	1629.4
0.57	1629.5
1.07	1629.3
2.32	1628.5
4.07	1627.9
9.07	1626.0
16.07	1624.0
25.07	1623.3
36.07	1622.8
49.07	1623.3
64.07	1623.2
81.08	1621.5
100.08	1622.0
121.08	1620.2
144.08	1620.2
180.08	1620.7
300.08	1618.6

Tested By NC *Date* 10/8/2018 *Checked By* DS *Date* 10/16/2018

DCN: CT-24E Date: 3/2/98 C:\Users\Lab#02\Desktop\Projects Folder\Nashville Projects\2018\N2018-028 - WOOD - PS-902\001\[N2018-028-001-002 D2435.xlsm]FINAL PLOT

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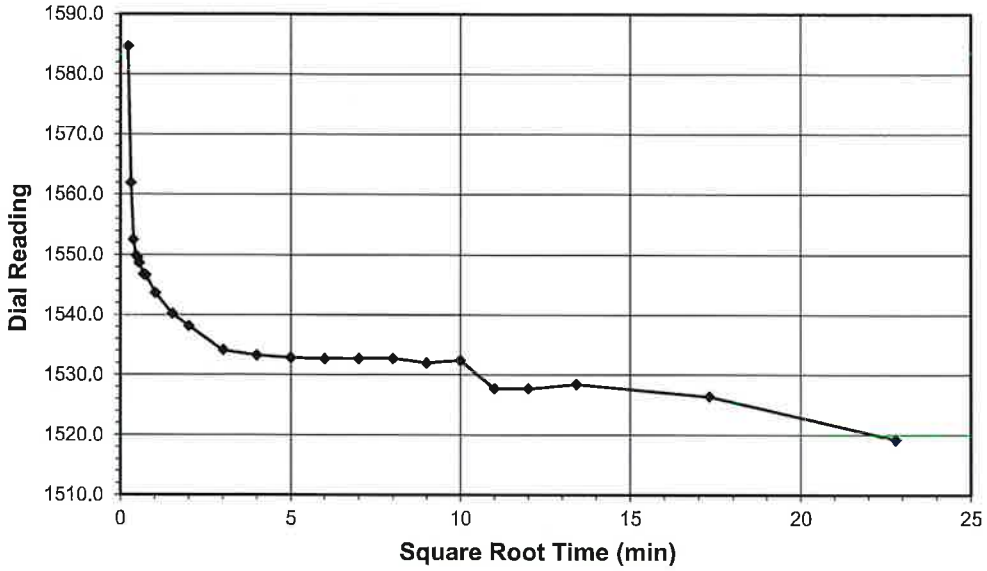
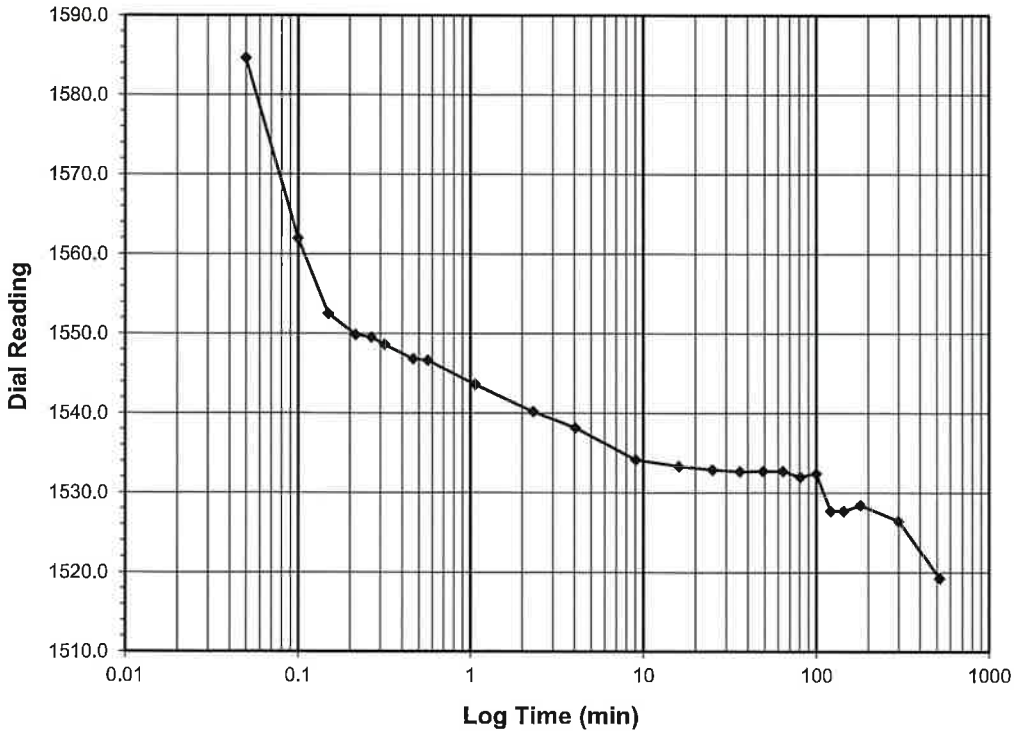
ONE DIMENSIONAL CONSOLIDATION

ASTM D 2435-11

Client	Wood PLC	Boring No.	B-11 OS
Client Project	2424-18-135 (PS-902)	Depth (ft)	8.0-10.0
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-002	Visual Description	BROWN SILTY SAND WITH GRAVEL

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED





Test Load	**(tsf)**	**8.0-2.0**
Final Reading	**(div)**	**1519.3**
Consolidometer No.		**N139**
1 Division	(in)	0.0001
Start Date		10/9/2018
Start Time		1:25:05

Elapsed Time (min)	Dial Reading (div)
Initial	**1618.6**
0.05	1584.6
0.10	1561.9
0.15	1552.5
0.22	1549.9
0.27	1549.6
0.32	1548.6
0.47	1546.8
0.57	1546.6
1.07	1543.6
2.32	1540.2
4.07	1538.2
9.07	1534.1
16.07	1533.3
25.07	1532.9
36.08	1532.7
49.08	1532.7
64.08	1532.7
81.08	1532.0
100.08	1532.4
121.08	1527.7
144.08	1527.7
180.08	1528.4
300.10	1526.4
520.10	1519.3

Tested By NC *Date* 10/9/2018 *Checked By* DS *Date* 10/16/2018

DCN: CT-24E Date: 3/2/98 C:\Users\Test Lab#02\Desktop\Projects Folder\Nashville Projects\2018\N2018-028 - WOOD - PS-902\001\[N2018-028-001-002 D2435.xlsm]FINAL PLOT

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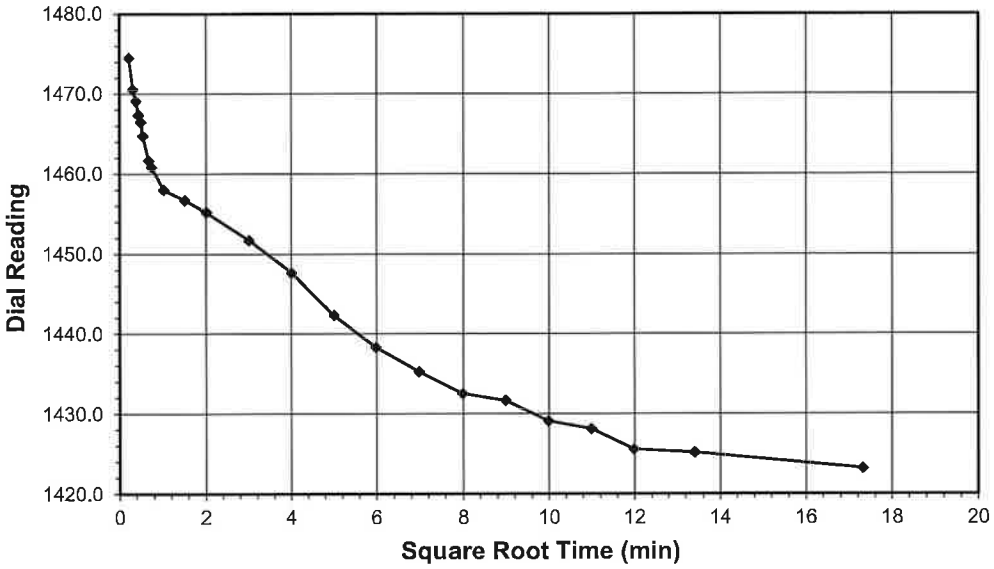
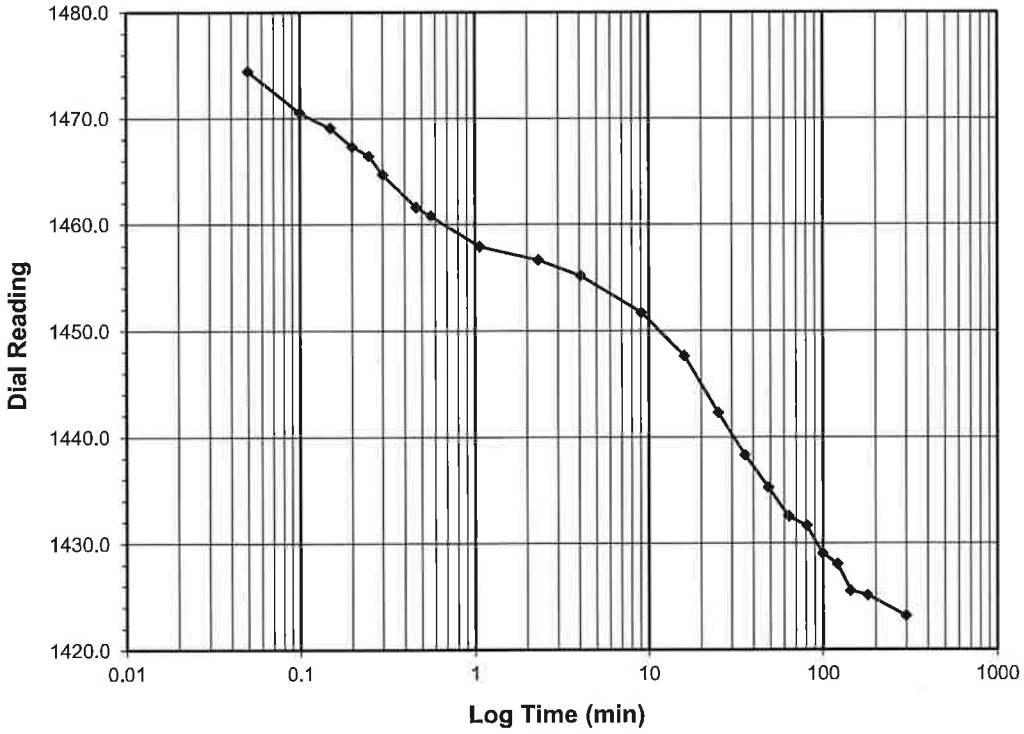
ONE DIMENSIONAL CONSOLIDATION

ASTM D 2435-11

Client	Wood PLC	Boring No.	B-11 OS
Client Project	2424-18-135 (PS-902)	Depth (ft)	8.0-10.0
Project No.	N-2018-028-001	Sample No.	ST-1
Lab ID	N-2018-028-001-002	Visual Description	BROWN SILTY SAND WITH GRAVEL

Sample Conditions: UNDISTURBED, INUNDATED AND DOUBLE DRAINED





Test Load	**(tsf)**	**2.0-0.5**
Final Reading	**(div)**	**1423.2**
Consolidometer No.		**N139**
1 Division	(in)	0.0001
Start Date		10/9/2018
Start Time		13:25:34

Elapsed Time (min)	Dial Reading (div)
Initial	**1519.3**
0.05	1474.5
0.10	1470.5
0.15	1469.1
0.20	1467.3
0.25	1466.5
0.30	1464.7
0.47	1461.6
0.57	1460.8
1.07	1458.0
2.32	1456.7
4.07	1455.2
9.07	1451.7
16.07	1447.6
25.07	1442.3
35.88	1438.3
48.83	1435.3
63.83	1432.6
80.83	1431.7
99.83	1429.1
120.83	1428.1
143.83	1425.6
179.83	1425.2
299.83	1423.2

Tested By NC *Date* 10/9/2018 *Checked By* DS *Date* 10/16/2018

DCN: CT-24E Date: 3/2/98 C:\Users\Lab#02\Desktop\Projects Folder\Nashville Projects\2018\N2018-028 - WOOD - PS-902\001\[N2018-028-001-002 D2435.xlsm]FINAL PLOT

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PART OF THE SOUTHWEST 1/4 OF SECTION 6, TOWNSHIP 6 NORTH, RANGE 9 EAST, IN THE CITY OF FITCHBURG, DANE COUNTY, WISCONSIN, WHICH IS BOUNDED AND DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHWEST CORNER OF SAID SOUTHWEST 1/4; THENCE N00°54'30"E ALONG THE WEST LINE OF SAID SOUTHWEST 1/4 60.00 FEET TO THE POINT OF BEGINNING OF LANDS DESCRIBED HEREINAFTER; THENCE N00°54'30"E ALONG SAID WEST LINE 1260.95 FEET TO A POINT IN THE SOUTH LINE OF FOURTH ADDITION TO JAMESTOWN; THENCE S88°14'32"E ALONG SAID SOUTH LINE 1185.15 FEET TO A POINT; THENCE N00°59'08"E ALONG SAID SOUTH LINE 108.79 FEET TO A POINT; THENCE S88°02'32"E ALONG SAID SOUTH LINE 959.76 FEET TO A POINT; THENCE S00°07'28"W 287.03 FEET TO A POINT ON THE NORTH LINE OF FITCHRONA ROAD; THENCE S88°29'33"W ALONG SAID NORTH LINE 162.53 FEET TO A POINT; THENCE N87°57'47"W ALONG SAID NORTH LINE 773.45 FEET TO A POINT OF CURVATURE; THENCE SOUTHWESTERLY 581.50 FEET ALONG SAID NORTH LINE AND ARC OF A CURVE, WHOSE CENTER LIES TO THE SOUTHEAST, WHOSE RADIUS IS 363.00 FEET, AND WHOSE CHORD BEARS S46°08'43"W 521.29 FEET TO A POINT; THENCE S00°15'07"W ALONG SAID NORTH LINE 155.82 FEET TO A POINT; THENCE S05°14'28"W ALONG SAID NORTH LINE 138.07 FEET TO A POINT; THENCE S00°15'12"W ALONG SAID NORTH LINE 352.02 FEET TO A POINT; THENCE S13°52'50"W ALONG SAID NORTH LINE 18.08 FEET TO POINT "A" ON THE NORTH LINE OF MCKEE ROAD "CTH PD"; THENCE S89°03'48"W ALONG SAID NORTH LINE 271.64 FEET TO A POINT; THENCE N88°12'32"W ALONG SAID NORTH LINE 255.12 FEET TO A POINT; THENCE S89°47'50"W ALONG SAID NORTH LINE 209.06 FEET TO A POINT; THENCE S81°09'39"W ALONG SAID NORTH LINE 100.03 FEET TO THE POINT OF BEGINNING.

SAID DESCRIBED PARCEL OF LAND CONTAINS 1,149,920 SQUARE FEET OR 32.596 ACRES.