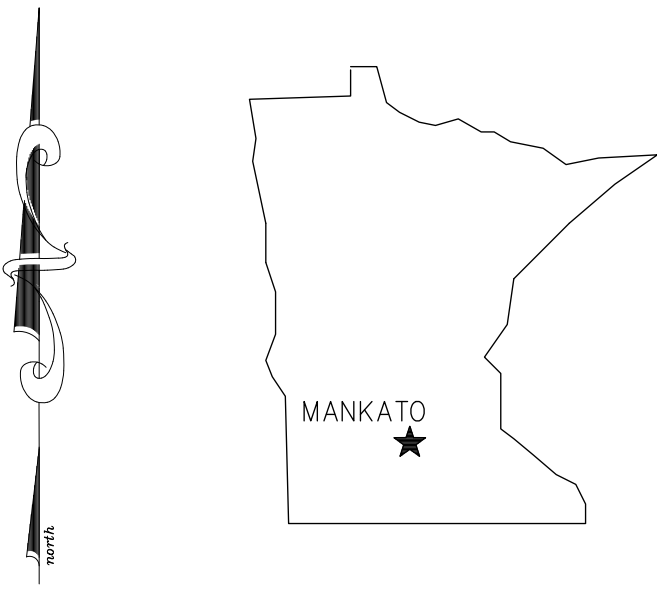
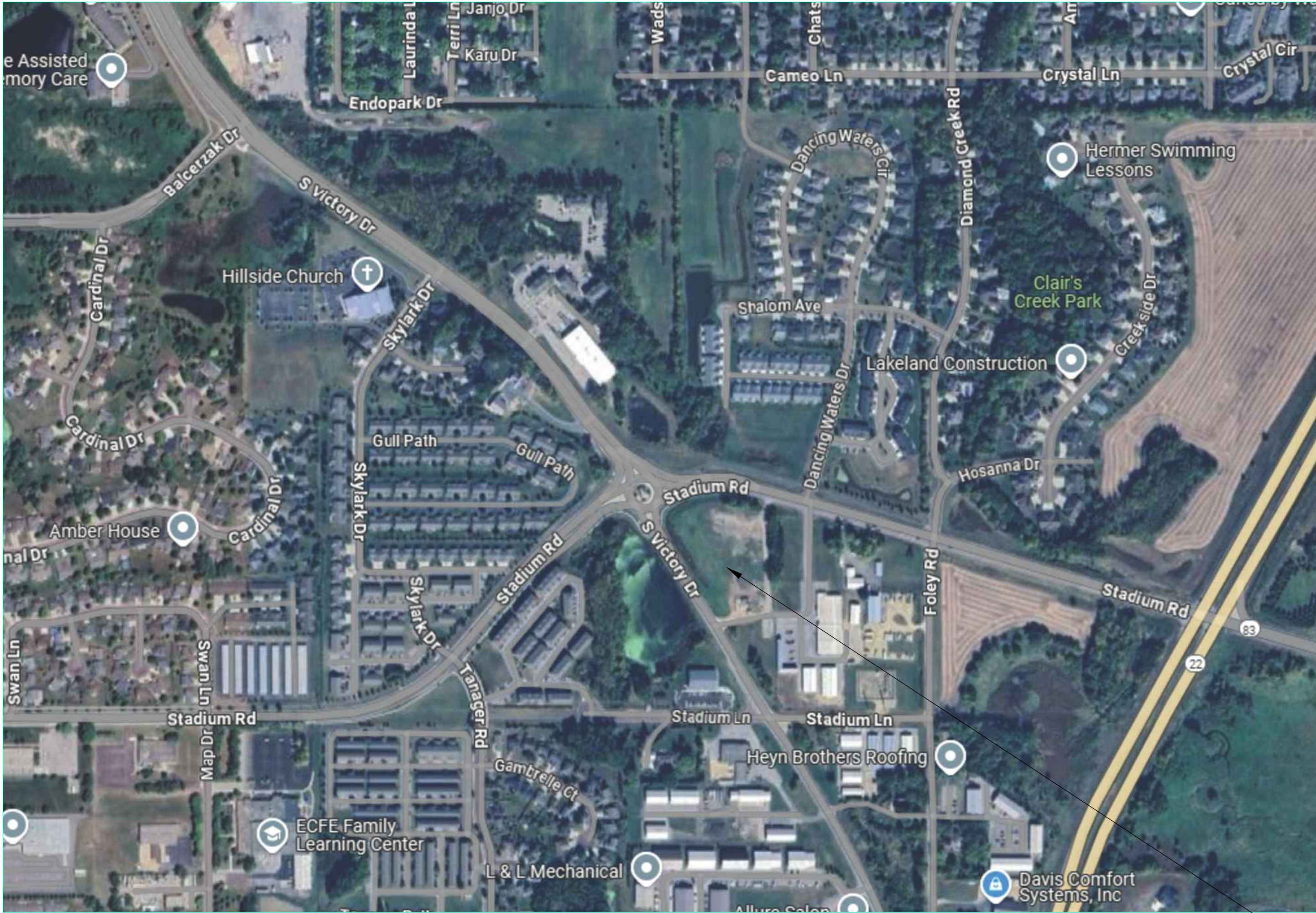


MANKATO APARTMENTS
MANKATO, MN



PROJECT LOCATION

INDEX TO SHEETS

- C1: TITLE SHEET
- C2: EXISTING CONDITIONS
- C3: HARDSCAPE PLAN
- C4: UTILITY PLAN
- C5: GRADING PLAN
- C5.1: SITE AMENITY PLAN
- C6: LANDSCAPE PLAN
- C7: DETAILS
- C8: SWPPP NARRATIVE& DETAILS
- C9: DETAILS
- C10–C11: SPECIFICATIONS

THIS PLAN CONTAINS 12 SHEETS

LEGEND

- | | | | |
|--|-----------------------------------|--|--|
| | = 5/8"Ø X 16" iron stake monument | | = Sign |
| | =Iron stake monument-Found | | = Sign-Handicap |
| | = Water Main | | = Light Pole |
| | = Sanitary Sewer | | = Power Pole |
| | = Storm Sewer | | = Guy Anchor |
| | = Gas Main | | = Fire hydrant |
| | = Underground Telephone | | = Water Main Valve |
| | = Overhead Telephone | | = Fire Sprinkler |
| | = Fiber-Optics | | = Cleanout |
| | = Underground Electric | | = Culvert |
| | = Overhead Electric | | = Gas Main Valve |
| | = Chain Link Fence | | = Catch Basin |
| | = Control Access | | = Manholes |
| | = Gate Post | | = Spot Elevation |
| | = Bollards | | = Rim Elevation |
| | = Electric Meter | | = Line Elevation |
| | = Gas Meter | | =Concrete Surface |
| | = Fiber-Optics Box | | =Bituminous Surface |
| | = Telephone Pedestal | | =Gravel Surface |
| | = Light Tower | | =Proposed Pavement Elevation |
| | = Silt Fence | | =Proposed Top/Bottom of Retaining Wall Elevation |
| | = Furnish & Install | | |
| | = Existing Elevation Contour Line | | |
| | = Proposed Elevation Contour Line | | |

APPLICABLE CONSTRUCTION PERMITS

ALL CONSTRUCTION WITHIN ROAD RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE PERMIT AS ISSUED BY THE ROAD AUTHORITY.

GENERAL NOTES

DEVELOPER, CONTRACTOR AND ALL SUBCONTRACTORS SHALL COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES GOVERNED BY STATE AND LOCAL JURISDICTION.
SITE IRRIGATING, LIGHTING, LANDSCAPING, SIGNING ARE NOT A PART OF THIS PLAN.
PROVIDE EROSION CONTROL PER NPDES PERMIT REQUIREMENTS AND AS SHOWN.
PROVIDE HANDICAP CURB RAMPS & SIGNAGE. COMPLY WITH ALL AMERICAN DISABILITY ACT REQUIREMENTS.
ALL CONCRETE OR ASPHALTIC PAVEMENT CONSTRUCTION SHALL COMPLY WITH THE PROVISIONS OF MN/DOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION.
A ROCK CONSTRUCTION ENTRANCE IS REQUIRED AT ALL ENTRANCES FROM BITUMINOUS PAVEMENT.
ACCESS FOR LOCAL RESIDENTS/BUSINESSES SHALL ALWAYS BE MAINTAINED.
PROVIDE PAVEMENT STRIPING AS SHOWN
CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FOR CONSTRUCTION.
SEE BOUNDARY SURVEY BY OTHERS FOR SITE BOUNDARIES.
ANY ALTERATIONS OR REVISIONS TO THE SITE DEVELOPMENT PLAN AS SHOWN SHALL NOT BE THE RESPONSIBILITY OF JONES, HAUGH & SMITH INC. AND SHALL RELEASE JONES, HAUGH & SMITH INC. OF ANY LIABILITY FOR ANY DAMAGES CAUSED THEREFROM UNLESS WRITTEN AUTHORIZATION OR PLAN REVISION HAS BE APPROVED BY JONES, HAUGH & SMITH INC. PRIOR.

BENCHMARK 1

Top head of spike in power pole at southeast corner of property.
Elevation = 1001.49

BASIS OF BEARING SYSTEM

All bearings are based upon the MnDot Blue Earth County Coordinate System Nad 83 (96) Horn Adjustment Grid

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer in the State of Minnesota.
Brian J. Johnson
Brian J. Johnson
Reg. No. 42744 Date: 9/20/25

JONES
HAUGH
SMITH
Engineers - Surveyors
515 South Washington Ave. Albert Lea, MN 56007
507-373-4876

MANKATO
APARTMENTS

Project:

Revision:

No. 25-188 Date: 9/20/2025

Drawn: **bjj** Checked:

Project Manager:

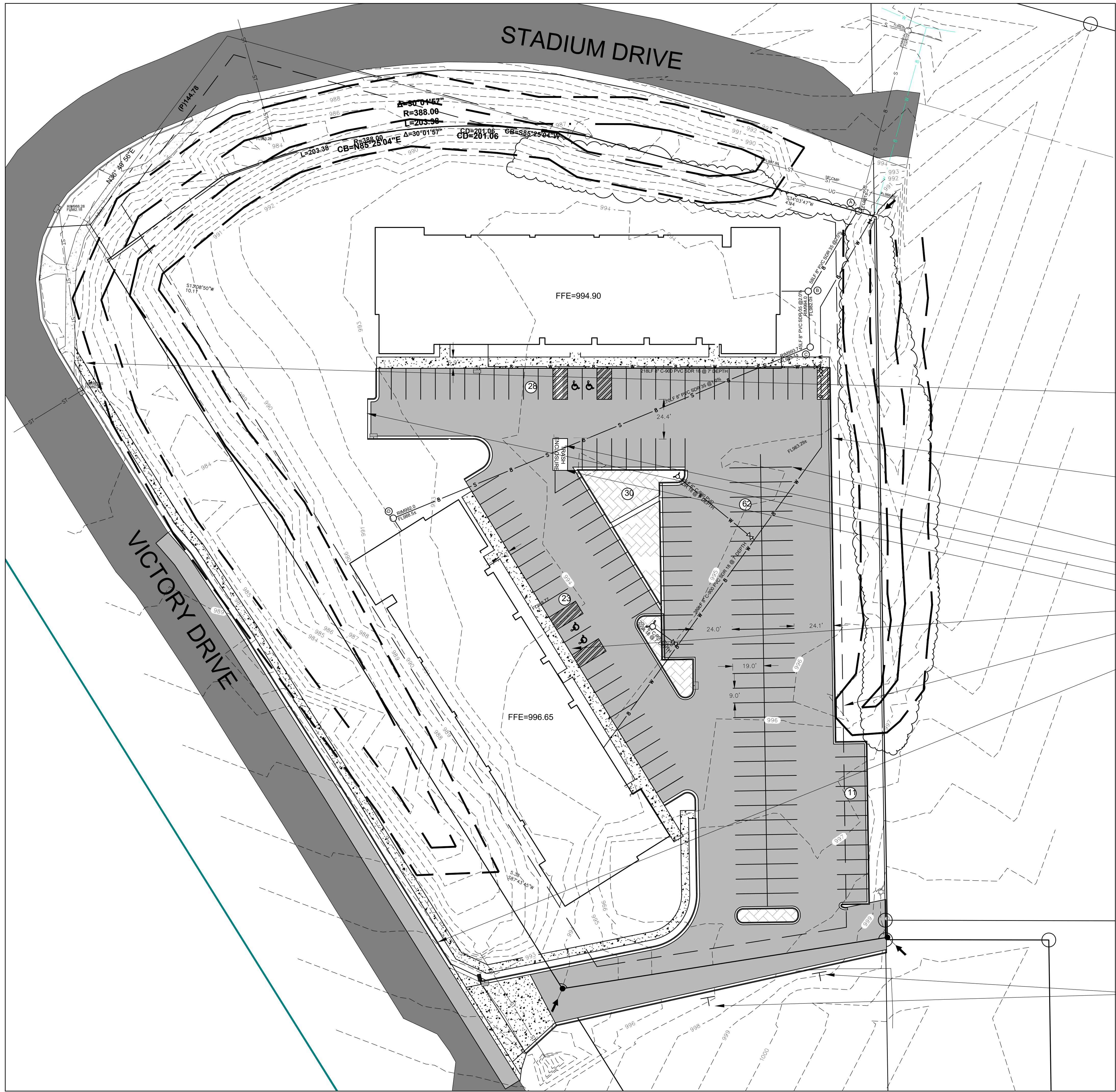
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Sheet Title:

TITLE SHEET

Sheet No.:

C1



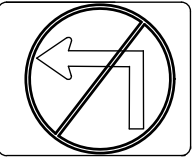
PARKING CALCULATION:
PARKING REQUIRED: 1-1/2 STALLS PER DWELLING UNIT
PARKING REQUIRED: 1-1/2 STALLS* 82 DWELLING UNITS = 123 STALLS
PARKING STALLS PROVIDED: 154

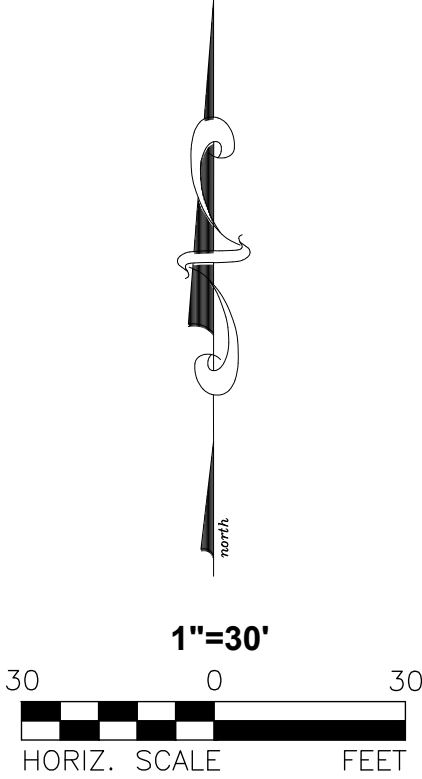
F&I NEW SIDEWALK (2% CROSS SLOPE) ALONG VICTORY DR. WITH 4' BOULEVARD (5% CROSS SLOPE) TYP.
CONNECT NEW SIDEWALK TO EXISTING TYP.

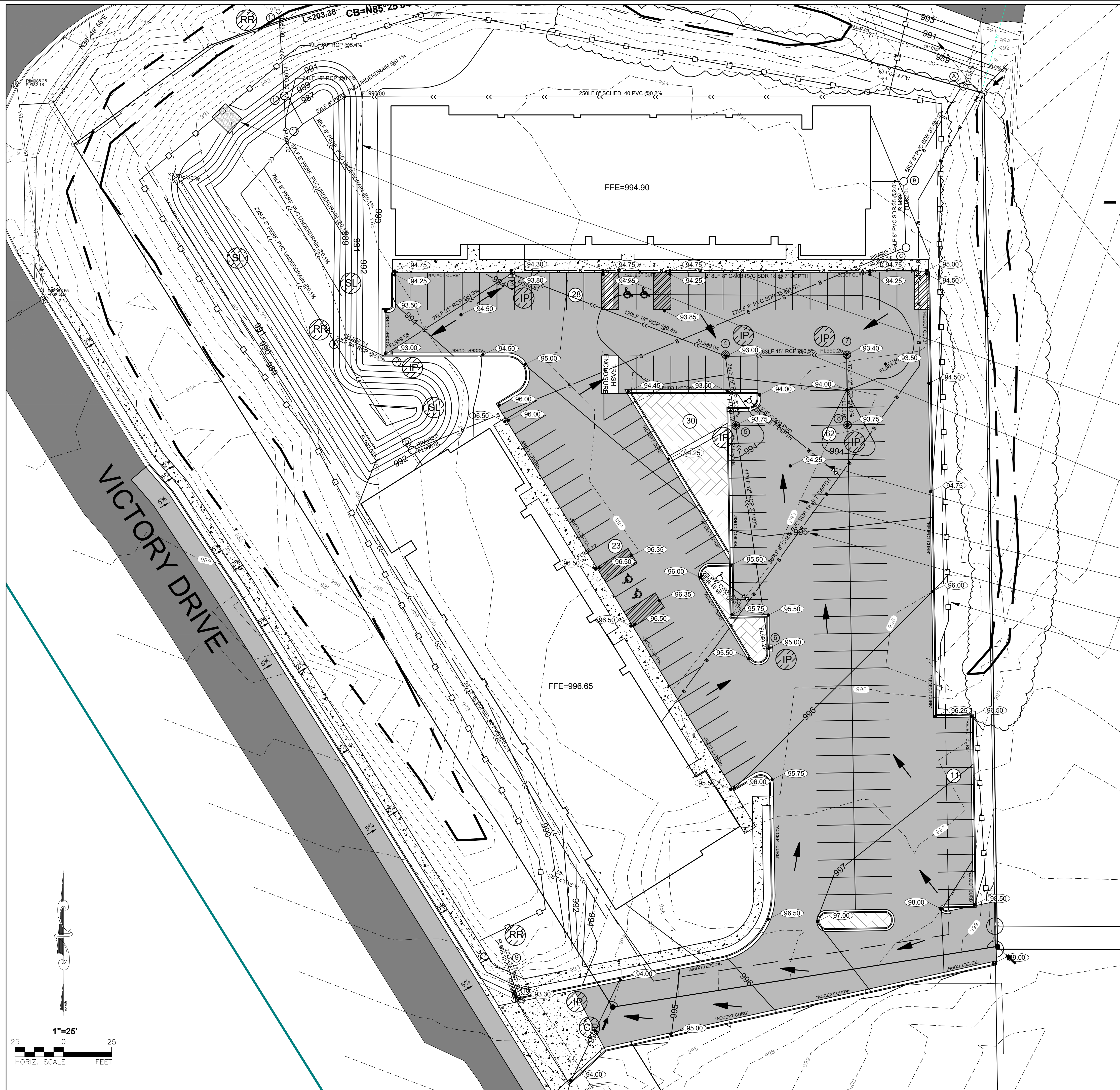
NEW CONCRETE B618 CURB & GUTTER TYP.

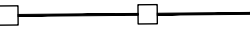
F&I LATEX PAVEMENT STRIPING/MESSAGES TYP.
F&I CONCRETE PAVEMENT SECTION WITHIN TRASH ENCLOSURE TYP.
F&I CURB CUT FOR POND MAINTENANCE ACCESS
PROPOSED DUMPSTER ENCLOSURE LOCATION-SEE ARCHITECTURAL
F&I THICKENED EDGE WALK ALONG BUILDING EXCEPT AT ADA STALLS TYP.
SEE THICKENED EDGE WALK DETAIL AND RAISED PAVEMENT DETAIL
BUILDING SETBACK LINE TYP.

F&I B624 CURB & GUTTER ALONG EDGE OF VICTORY DRIVE ALONG NEW SIDEWALK
SAWCUT & REMOVE EXISTING BITUMINOUS SHOULDER FULL DEPTH AND WIDTH. SAWCUT FULL DEPTH AT
MATCH POINTS AND PATCH SHOULDER WITH SAME EXISTING BITUMINOUS SECTION.
NEW SHOULDER TO HAVE CROSS SLOPE OF 5%. SEE GRADING PLAN AND SIDEWALK DETAIL


F&I (2) R3-2 NO LEFT TURN SIGNS
PER MUTCD MANUAL





SWPPP LEGEND	QUANTITY
 = ROCK CONSTRUCTION ENTRANCE	1 EA
 = INLET PROTECTION-TYP. AT ALL DOWNGRADIENT INLETS	9 EA
 = SILT FENCE-FOR PERIMETER CONTROL	1400 LF
 = WOOD CHIP BIO-ROLL/SILT SOCK	
 = HYDRO-SEED TYPE LAWN OVER 6" MIN. BLACK DIRT TOPSOIL (TYP. TO ALL NON-PAVED DISTURBED AREAS WITHIN SITE)	1 ACRE
 = DESIGNATED CONCRETE WASHOUT AREA	1 EA
 = CL. III RIPRAP ENERGY DISSIPATION-PLACE WITHIN 24 HOURS	25 CY
 = RUNOFF FLOW DIRECTION	
 = DRAINAGE AREA BOUNDARY	
 = DESIGNATED POLLUTANT GENERATING AREA	1 EA
 = DESIGNATED STEEP SLOPE AREA (4:1 OR GREATER) F&I CATEGORY 3 BLANKET ON ALL 4:1 OR STEEPER SLOPES	1300 SY
ONSITE SOILS=SILTY CLAY, KLOSSNER MUCK PER NRCS SOIL SURVEY	

REMOVE EXISTING ACCESS ROAD & CULVERT-GRADE TO MATCH EXISTING ROAD SLOPES

PROPOSED FILTRATION BASIN-SEE BASIN DETAILS FOR SAND MEDIA
AND SEEDING REQUIREMENTS

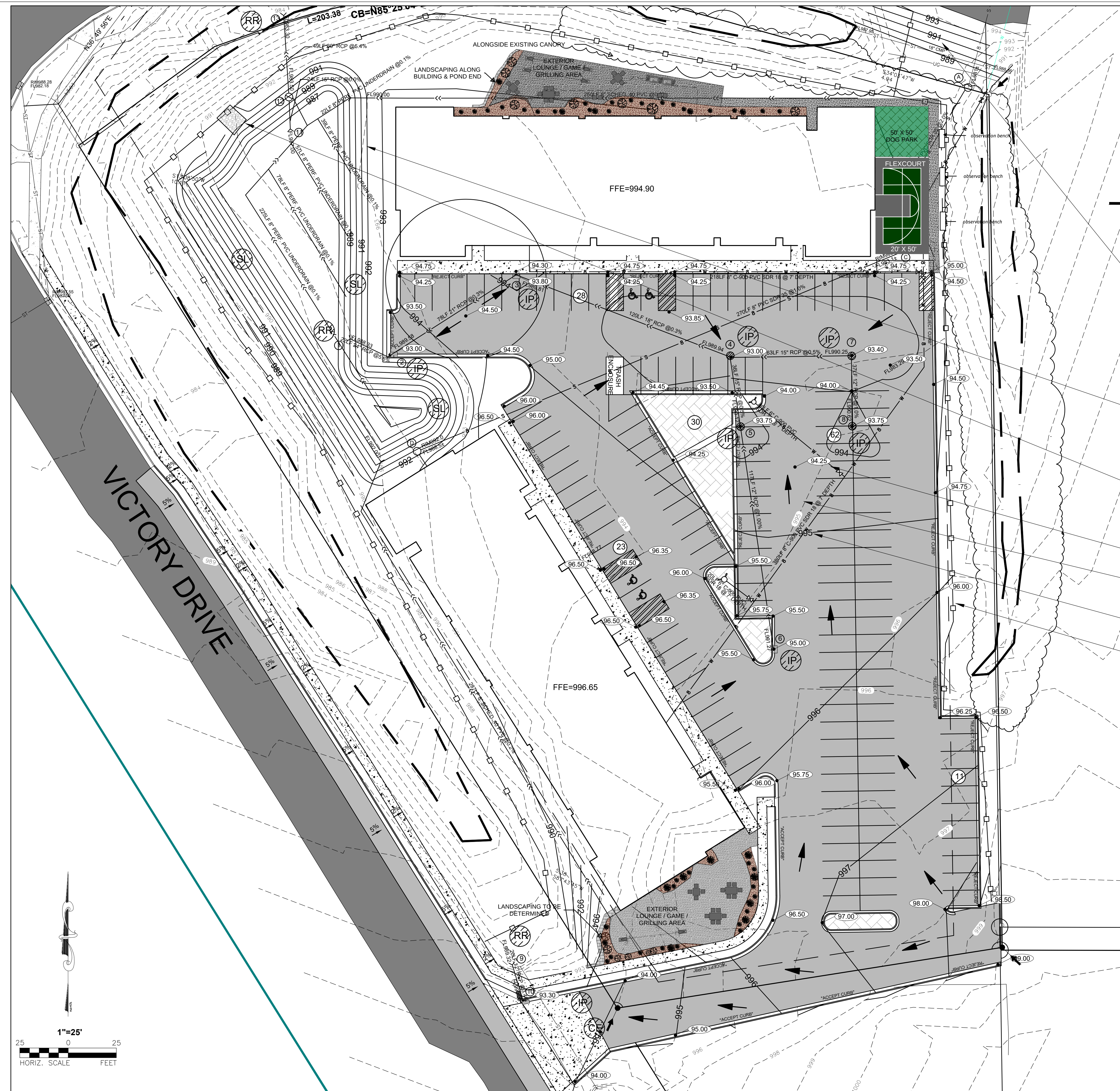
F&I EMERGENCY OVERFLOW (EOF) AT THIS LOCATION AT ELEV. 1192.00 -INSTALL 10'X12'X12" THICK RIPRAP OVERFLOW WITH CL. III RIPRAP OVER GEO-FABRIC

PROPOSED PAVEMENT/GUTTER ELEVATION (NGVD LESS 900) TYP

EXISTING ELEVATION CONTOUR TYP.

PROPOSED ELEVATION CONTOUR TYP

PROPOSED SILT FENCE (DOUBLE LINE ADJACENT TO ALL WETLANDS) TYP.



SWPPP LEGEND		QUANTITY
 = ROCK CONSTRUCTION ENTRANCE		1 EA
 = INLET PROTECTION-TYP. AT ALL DOWNGRADIENT INLETS		9 EA
 = SILT FENCE-FOR PERIMETER CONTROL		1400 LF
 = WOOD CHIP BIO-ROLL/SILT SOCK		
 = HYDRO-SEED TYPE LAWN OVER 6" MIN. BLACK DIRT TOPSOIL (TYP. TO ALL NON-PAVED DISTURBED AREAS WITHIN SITE)		1 ACRE
 = DESIGNATED CONCRETE WASHOUT AREA		1 EA
 = CL. III RIPRAP ENERGY DISSIPATION-PLACE WITHIN 24 HOURS		25 CY
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 = DESIGNATED STEEP SLOPE AREA (4:1 OR GREATER) F&I CATEGORY 3 BLANKET ON ALL 4:1 OR STEEPER SLOPES		1300 SY
ONSITE SOILS=SILTY CLAY, KLOSSNER MUCK PER NRCS SOIL SURVEY		

REMOVE EXISTING ACCESS ROAD & CULVERT-GRADE TO MATCH EXISTING ROAD SLOPES

PROPOSED FILTRATION BASIN-SEE BASIN DETAILS FOR SAND MEDIA
AND SEEDING REQUIREMENTS

F&I EMERGENCY OVERFLOW (EOF) AT THIS LOCATION AT ELEV. 1192.00 -INSTALL 10'X12'X12" THICK RIPRAP OVERFLOW WITH CL. III RIPRAP OVER GEO-FABRIC

PROPOSED PAVEMENT/GUTTER ELEVATION (NGVD LESS 900) TYP.

— EXISTING ELEVATION CONTOUR TYP.

— PROPOSED ELEVATION CONTOUR TYPE

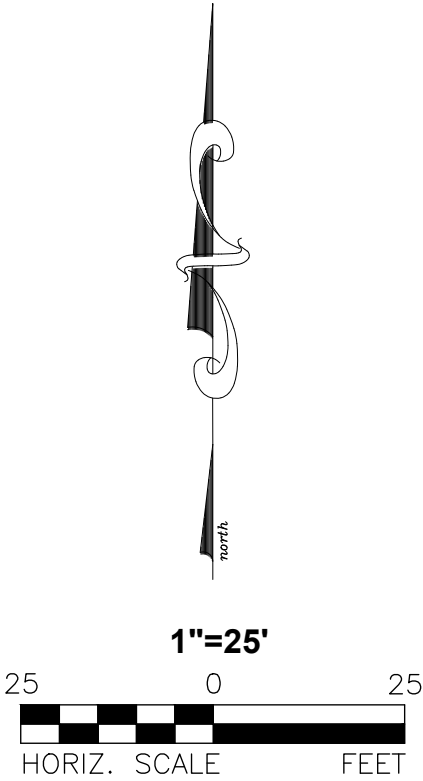
PROPOSED SILT FENCE TYP.



LANDSCAPING NOTES

Sec. 10-1740 PERIMETER OFF STREET PARKING LOT
(1) SHADE TREE/ 50 LF OF FRONTAGE
(1) EVERGREEN TREE/ 25 LF OF FRONTAGE
80% OPAQUE ALONG ALL PARKING FRONTING STREET
PLANTING BEDS SHALL BE MULCHED WITH BARK CHIPS,
ROCK MULCH, FEATHER ROCKS OR SIMILAR MATERIAL.
PERIMETER LANDSCAPING & TRANSITIONAL YARDS SHALL
CONSIST OF A COMBINATION OF GROUND COVER, SHADE
TREES OR EVERGREEN TREES, SHRUBS AND APPROPRIATE
SCREENING DEVICES SUCH AS DECORATIVE WALLS, FENCES OR

Label	Name	Scientific Name	Qty	Size	Root Type	mature size in feet	
TA	Techny Arborvitae	<i>Thuja Occidentalis 'Techny'</i>	35	6'	BB	H: 12-15'	W: 6-8'
ABS	Armstrong Maple	<i>Acer rubrum 'Armstrong'</i>	6	2.5"	BB	H:45'	W:15'
VPC	Velvet Pillar Crabapple	<i>Malus 'Velvetcole'</i>	2	1.5"	BB	H:20'	W:10-12'
RBC	River Birch Clump	<i>Betula nigra</i>	3	6' Clump		H:40-60'	W:30-40'
SGM	Sienna Glen Maple	<i>Acer x freemanii 'Sienna'</i>	2	2"	B&B	H:50'-60'	W:35'-40'
IPL	Ivory Pillar Lilac	<i>Syringa reticulata 'Willamette'</i>	4	1.5"	B&B	H: 20'	W: 12'
MJ	Medora Juniper	<i>Juniperus Scopulorum 'medora'</i>	5	#5	Cont	H:12-15'	W:4'-6'
BHS	Black Hills Spruce	<i>Picea glauca densata</i>	5	6'	B&B	H:30-40'	W: 35'
NAH	Northern Acclaim Honeylocust	<i>Gleditsia triacanthos 'Harve'</i>	1	2.5"	B&B	H: 45'	W: 35'
CH	Common Hackberry	<i>Celtis Occidentalis</i>	2	2.5"	B&B	H:50-75'	W:50'
AFD	Artic Fire Dogwood	<i>Cornus stolonifera 'Farrow'</i>	10	#3	Cont	H:5-6'	W:3-4'
BCB	Black Chokeberry	<i>Aronia Melanocarpa Elata</i>	10	#5	Cont	H:4-6'	W:4'6"
2484 SF Shredded Hardwood Mulch 3" depth over woodfiber weed suppression mat. (Manufacture Profile) bordered by a cut edge							
Building 1							
1650 1.5" Rock Mulch 3" depth over 6 Mil black plastic bordered by Professional Grade Vinyl Edging, 4 stakes per edging							
575 Professional Grade Vinyl Edging, 4 stakes per edging							
Building 2							
1650 1.5" Rock Mulch 3" depth over 6 Mil black plastic bordered by Professional Grade Vinyl Edging, 4 stakes per edging							
575 Professional Grade Vinyl Edging, 4 stakes per edging							



MANKATO
APARTMENTS

Project:

Revision:

No.:

Date: 9/20/2025

Drawn: **bjj**

Checked:

Project Manager:

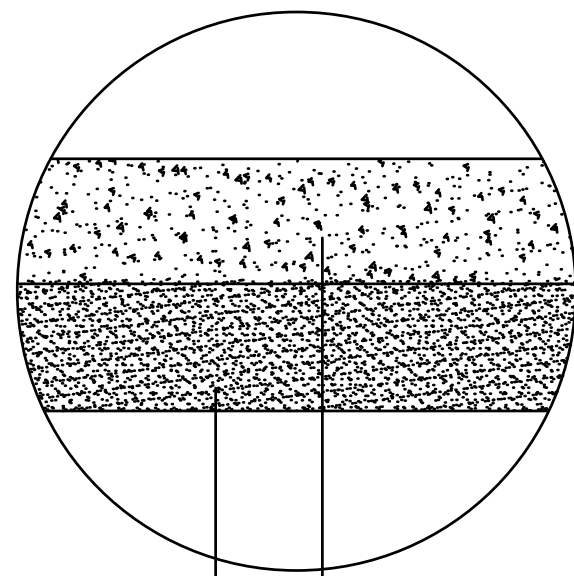
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Sheet Title:

LANDSCAPE
PLAN

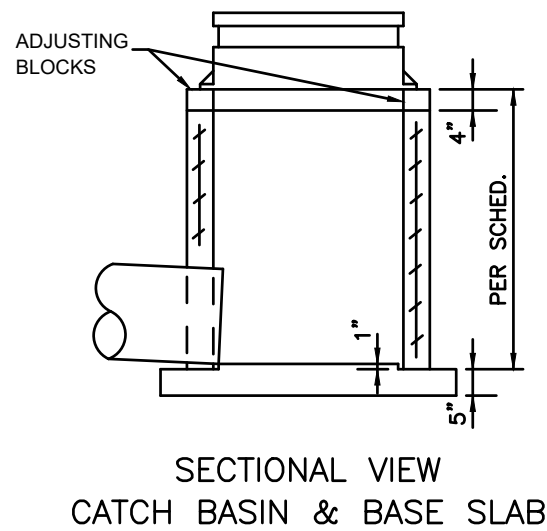
Sheet No.:

C6



ALL JOINTS SHALL BE SEALED USING AN APPROVED MN/DOT HOT POUR ELASTIC SEALANT (3723) (INCIDENTAL)

8" CONCRETE PAVEMENT (MN/DOT 2301)
6" AGGREGATE BASE CLASS V (MN/DOT 2211)



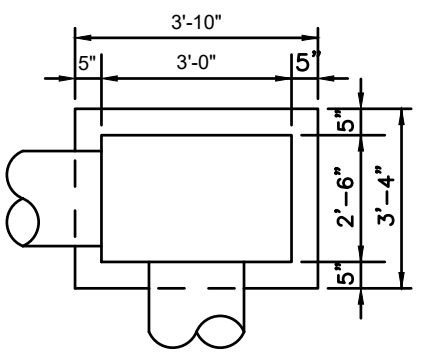
SECTIONAL VIEW
CATCH BASIN & BASE SLAB

NOTES:

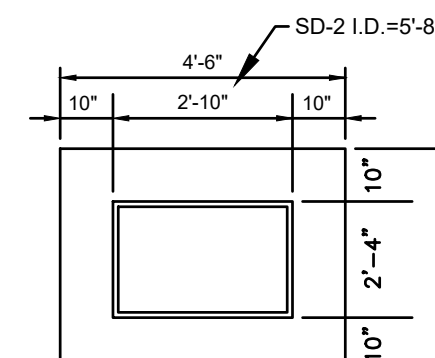
1. TO BE USED WITH NEENAH R3067 FRAMED COVER WITH 3" RAD. CURB BOX OR APPROVED EQUAL.
2. PIPE CUT-OUTS TO BE LOCATED WHERE REQUIRED.
3. ALTERNATE CAST-IN-PLACE BASE CAN BE USED.
4. MINIMUM REINFORCING SHALL BE WIRE FABRIC HAVING AN AREA OF NOT LESS THAN 0.12 SQ. IN. PER FOOT IN BOTH DIRECTIONS.

FOR USE WITH R3067 CASTING

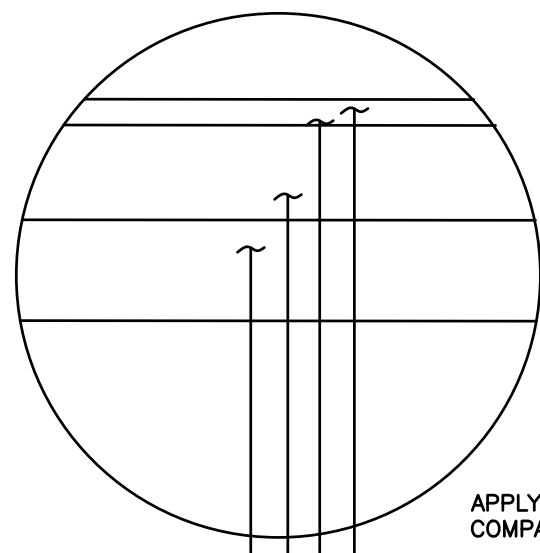
CATCH BASIN 2X3



CATCH BASIN PLAN

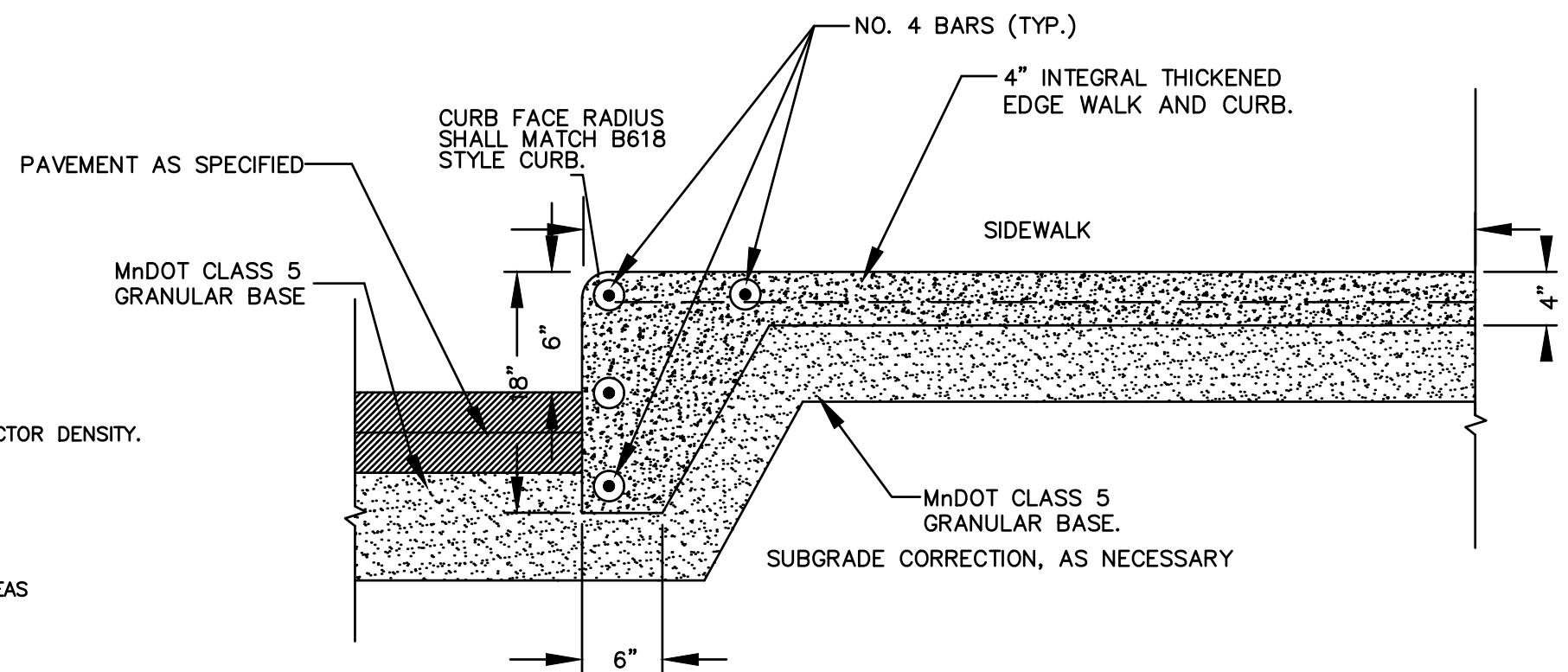


BASE SLAB PLAN



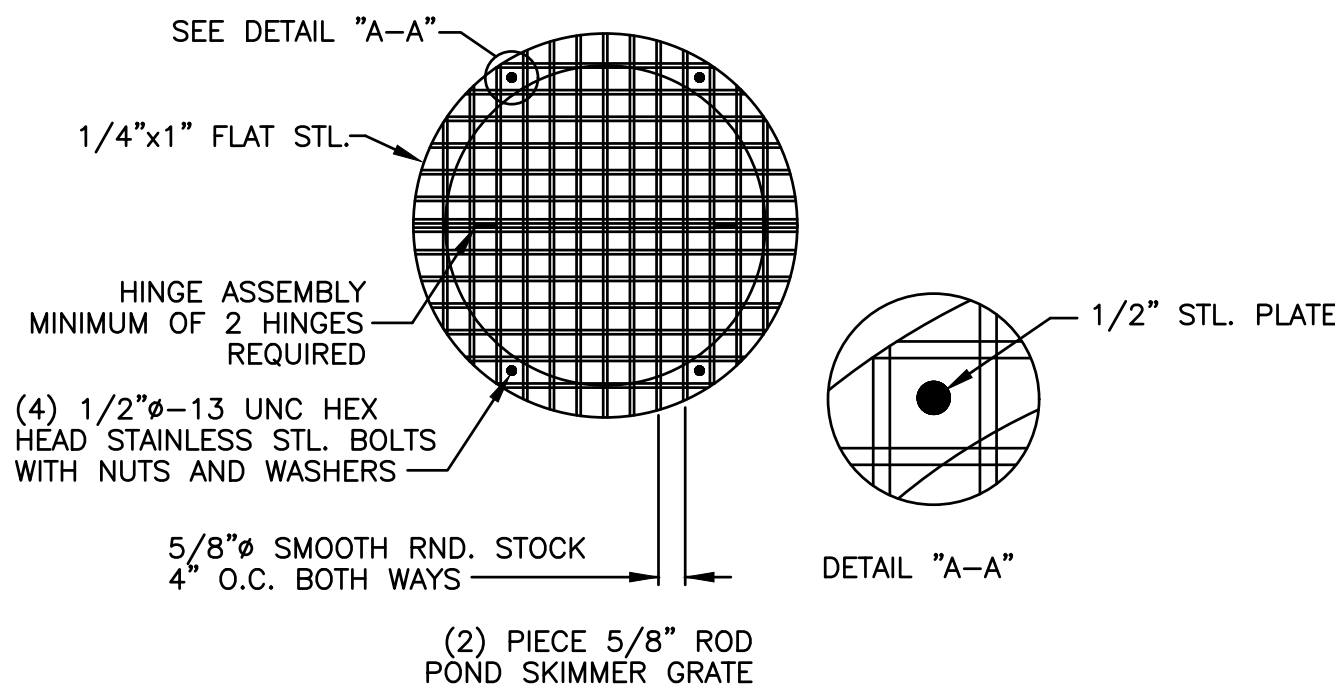
APPLY BITUMINOUS TACK COAT BETWEEN LIFTS
COMPACT ALL GRANULAR MATERIAL TO 100% OF PROCTOR DENSITY.
2.0" TYPE SPWEA240B WEAR COURSE
2.0" TYPE SPNWB230B BASE COURSE
12" CLASS V AGGREGATE BASE (2211)
SCARIFY THE UPPER 12" OF SUBGRADE IN "CUT" AREAS
ALL GRAVEL BASE SHALL EXTEND A MINIMUM OF 1' BEHIND ALL CURB

PARKING LOT PAVEMENT SECTION



THICKENED EDGE WALK SECTION

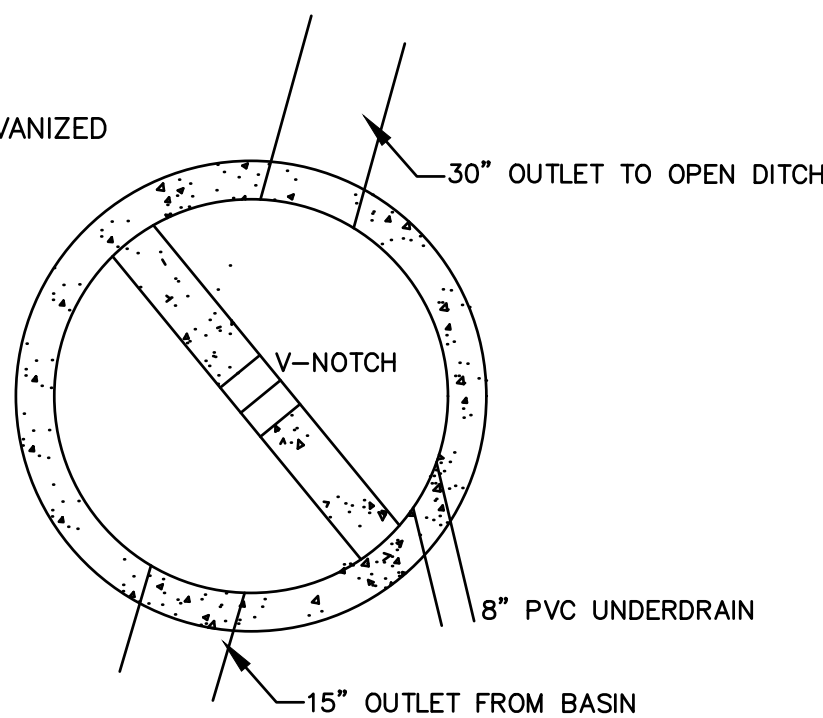
CONCRETE DRIVEWAY PAVEMENT (AT STADIUM ROAD) SECTION



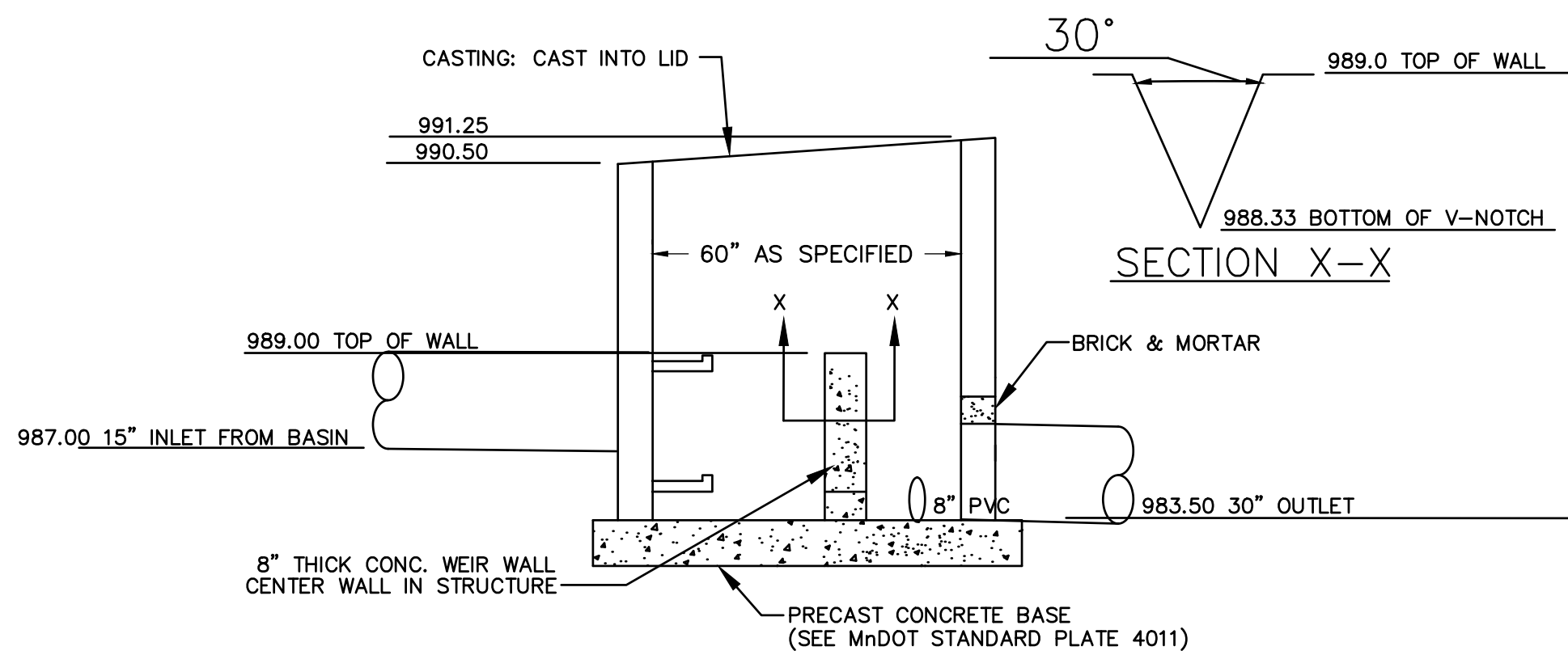
GRATE NOTES:

- 1) GRATE TO BE MADE IN TWO (2) PIECES
- 2) ALL METAL SHALL BE HOT-DIPPED GALVANIZED

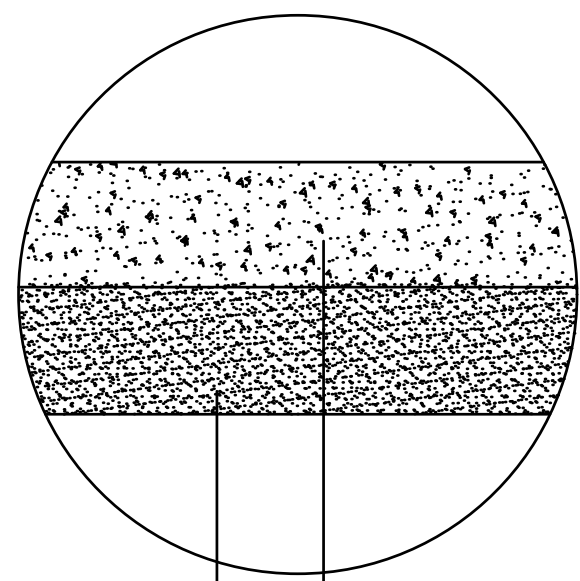
STRUCTURE 12 GRATE PLAN



V-NOTCH WEIR OUTLET STRUCTURE PLAN



V-NOTCH WEIR OUTLET STRUCTURE 12 SECTION

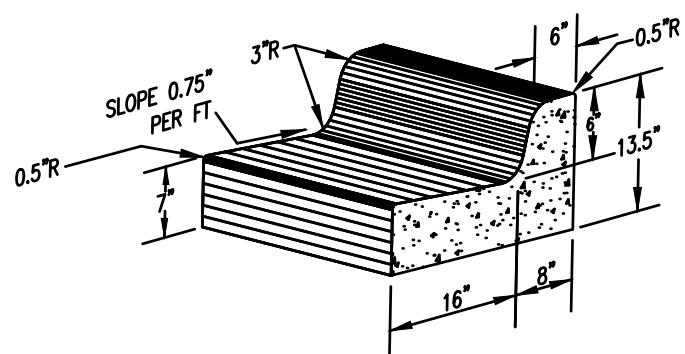


ALL JOINTS SHALL BE SEALED USING AN APPROVED MN/DOT HOT POUR ELASTIC SEALANT (3723) (INCIDENTAL)

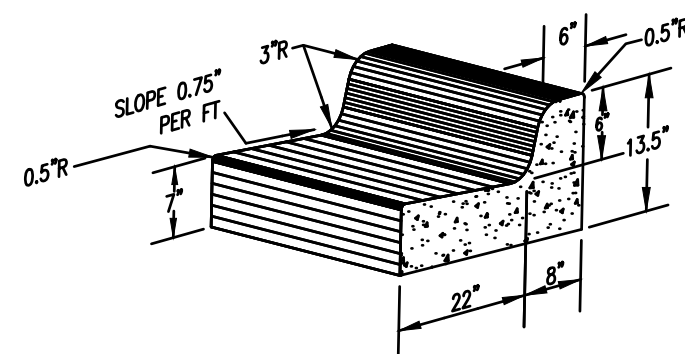
4" CONCRETE PAVEMENT (MN/DOT 2301)
3" AGGREGATE BASE CLASS V (MN/DOT 2211)

ALL CONCRETE SHALL BE PORTLAND CEMENT CONCRETE PAVEMENT WITH A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS, A 4" MAXIMUM SLUMP AND 5% - 7% ENTRAINED AIR.

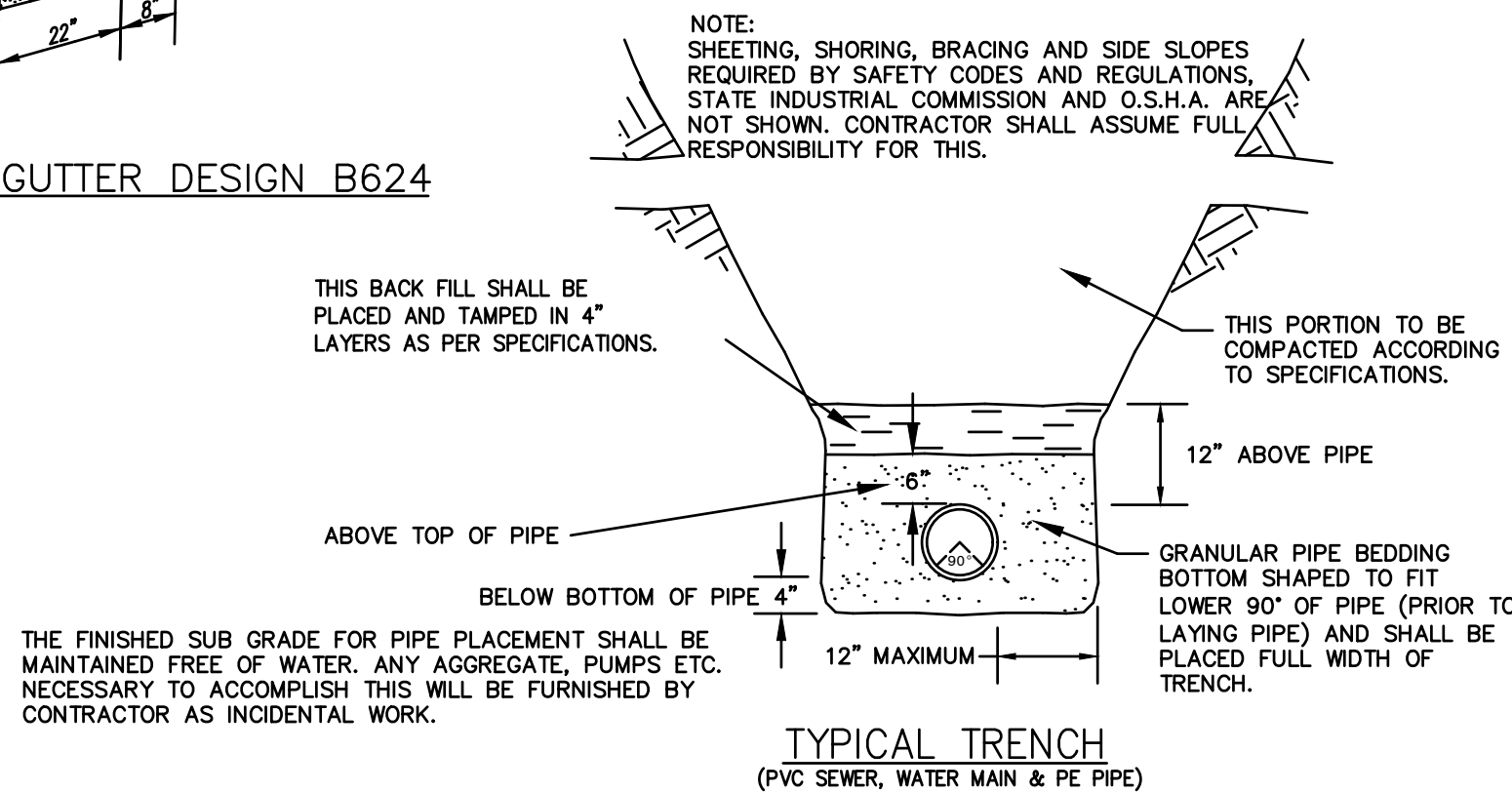
CONCRETE SIDEWALK SECTION



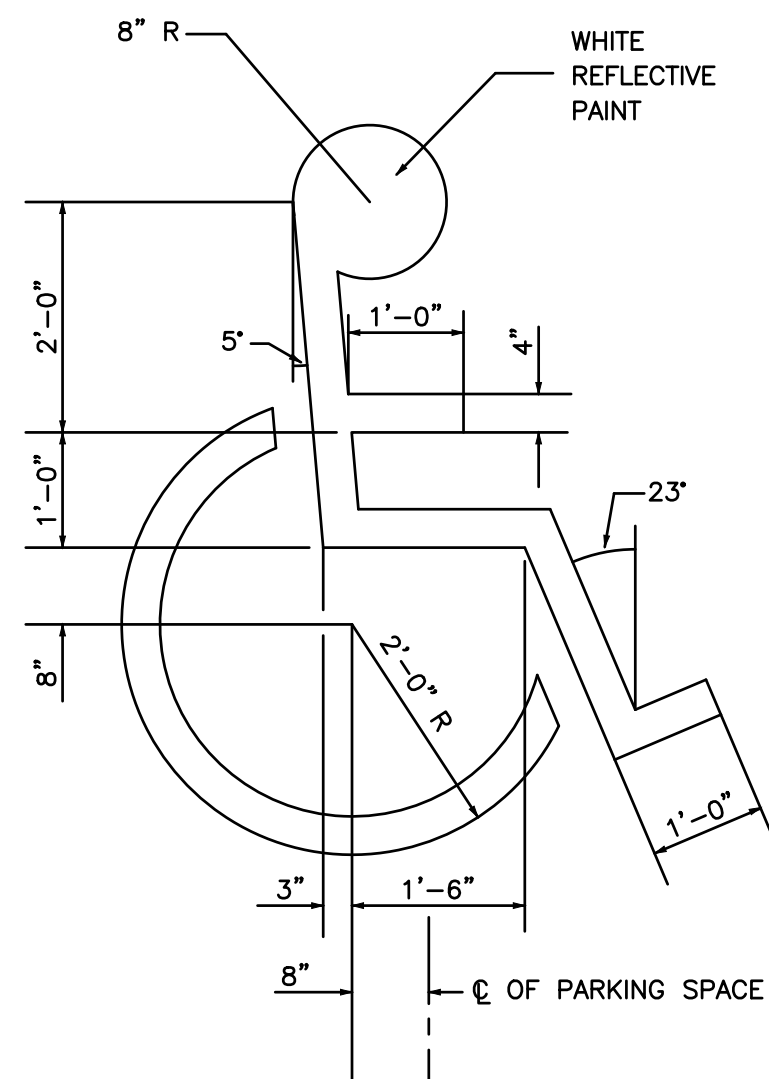
CONCRETE CURB & GUTTER DESIGN B618



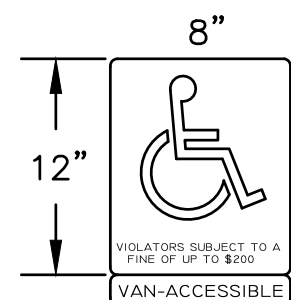
CONCRETE CURB & GUTTER DESIGN B624



TYPICAL TRENCH
(PVC SEWER, WATER MAIN & PE PIPE)



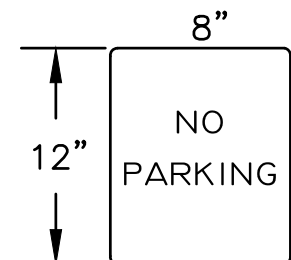
INTERNATIONAL HANDICAP SYMBOL



STEEL POST MOUNTED
(PERMANENT)

INSTALL AT ALL HANDICAP STALLS
60"-66" ABOVE FINISH GRADE
CENTERED AT THE HEAD OF THE STALL

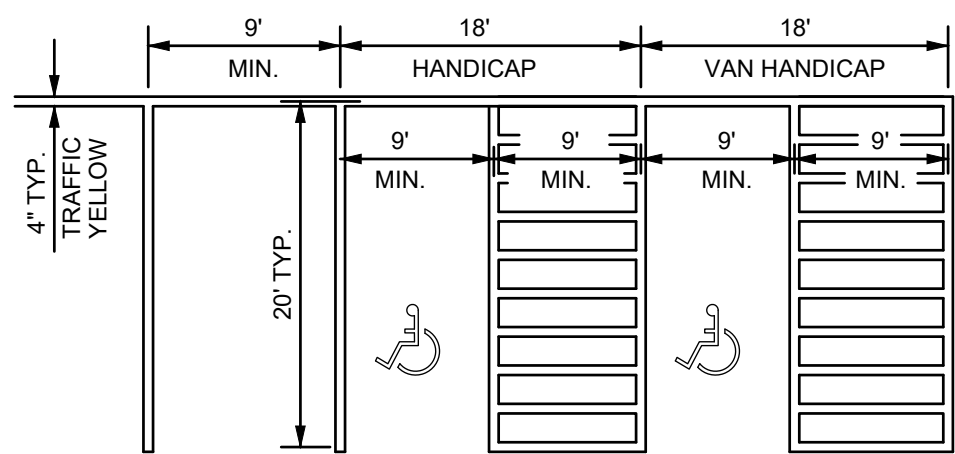
SIGN PANEL DETAIL



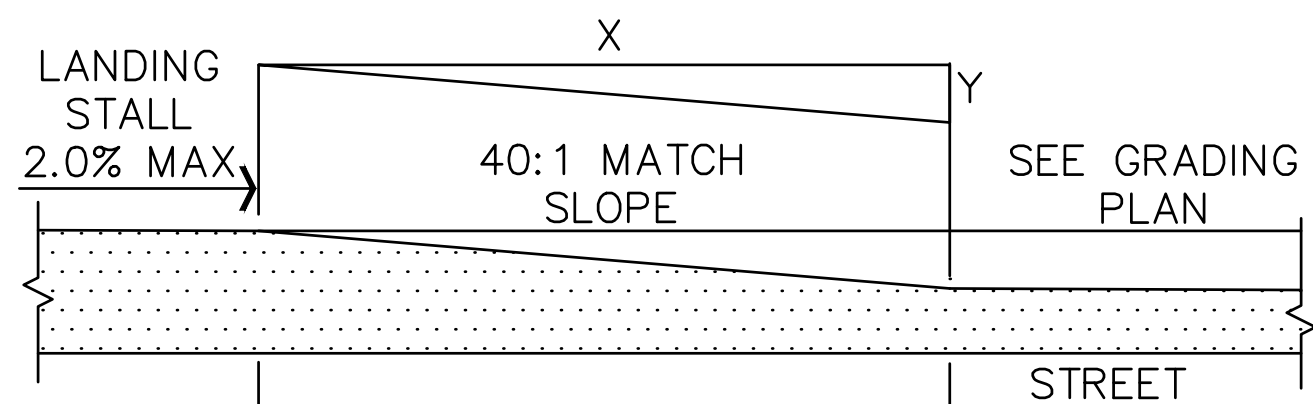
STEEL POST MOUNTED
(PERMANENT)

INSTALL AT ALL HANDICAP ACCESS
AISLES-60"-66" ABOVE FINISH GRADE
CENTERED AT THE HEAD OF THE STALL

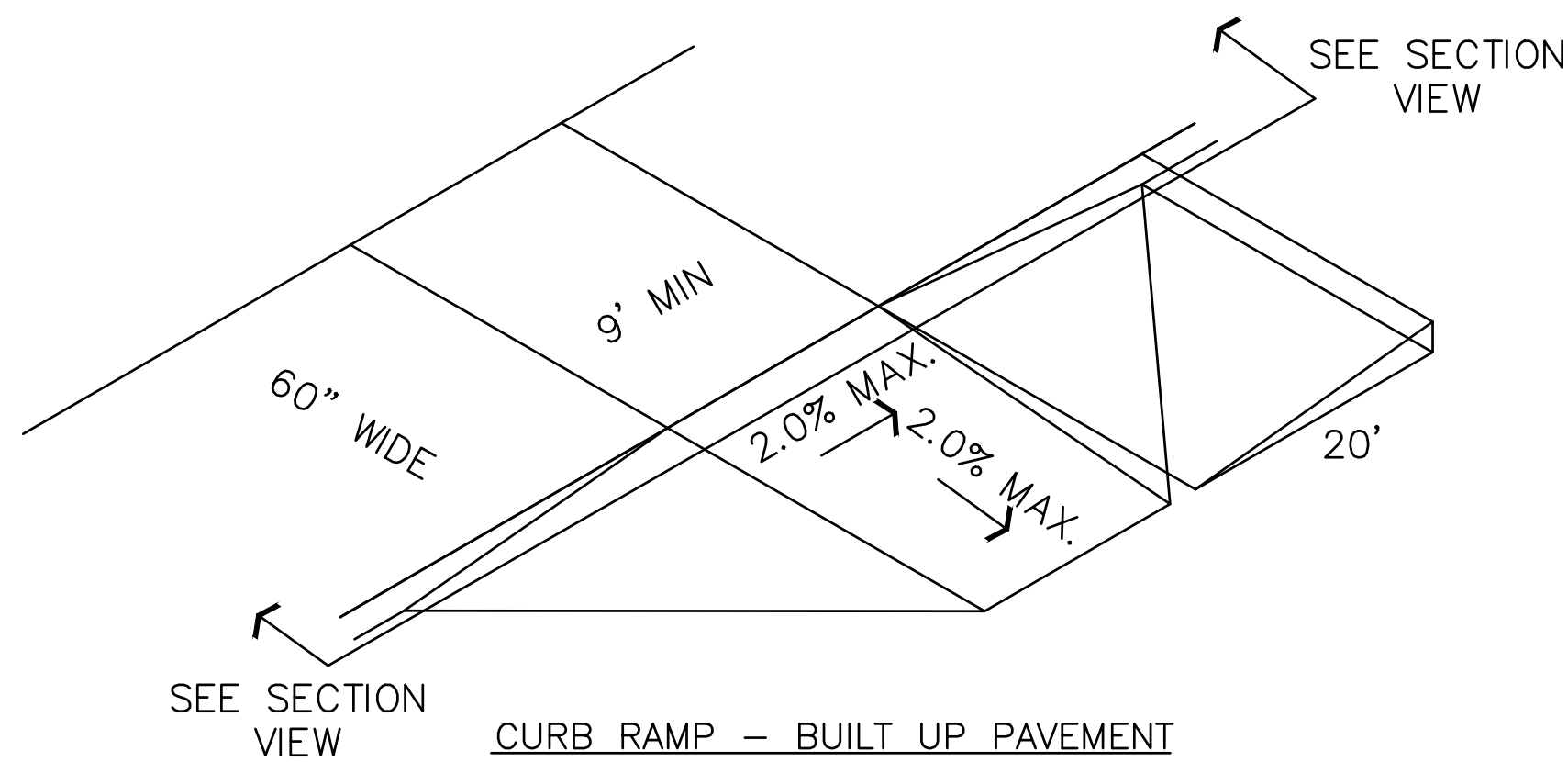
SIGN PANEL DETAIL



90° STALL



CROSS SECTION



CURB RAMP - BUILT UP PAVEMENT

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

Blair J. Johnson
Reg. No. 4274

Date: 9/20/25

JONES
HAUGH
SMITH
Engineers & Surveyors
515 South Washington Ave. Albert Lea, MN 55737-4876

Consultant:

MANKATO
APARTMENTS

Project:

Revision:

No.: Date: 9/20/2025

Drawn: bj

Checked:

Project Manager:

Project Status: CD

Sheet Title:

DETAILS

Sheet No.:

C7

SWPPP NARRATIVE

CONSTRUCTION ACTIVITY INFORMATION

PROJECT NAME: MANKATO APARTMENTS
FACILITY IMPROVEMENT PROJECT

PROJECT LOCATION: MANKATO, MN

PROJECT SIZE: PARCEL SIZE: 4.25 DISTURBED ACRES

PROJECT TYPE: RESIDENTIAL BUILDING CONSTRUCTION

MAJOR SOIL TYPE: SILTY LOAM, KLOSSNER MUCK

CUMULATIVE IMPERVIOUS SURFACE:
EXISTING - 1.26 ACRES
POST CONSTRUCTION - 2.5 ACRES

DIRECT DISCHARGE FROM IMPERVIOUS SURFACE: 0.2 ACRES

RECEIVING WATERS:
CITY STORM SEWER

DATES OF CONSTRUCTION: 2025

OWNER: GROWTH HOLDINGS LLC

UNDERGROUND UTILITY/GRADING CONTRACTOR:

TO BE DETERMINED

PARTY RESPONSIBLE FOR LONG TERM O&M:
OWNER: GROWTH HOLDINGS LLC

GENERAL SITE INFORMATION

IMMEDIATELY FOLLOWING GRADING OF SLOPES OF 3:1 OR GREATER, SLOPES MUST BE STABILIZED WITH WOOD FIBER BLANKET (OR OTHER METHOD APPROVED BY THE ENGINEER) OVER APPROVED SEED MIXTURE AND A MINIMUM OF 4" OF TOPSOIL.

ALL EROSION CONTROL MEASURES SHALL REMAIN IN PLACE AND BE MAINTAINED IN GOOD CONDITION UNTIL THE SITE HAS BEEN RE-VEGETATED, AT WHICH TIME THE CONTRACTOR MAY REMOVE NECESSARY SILT FENCING TO CONSTRUCT ROADWAYS WHILE MAINTAINING ADEQUATE EROSION CONTROL IN ADJACENT AREAS. SUFFICIENT TOPSOIL SHALL BE STOCKPILED OR IMPORTED TO ALLOW FOR THE REPLACEMENT OF A MINIMUM OF 4" OF TOPSOIL FOR DISTURBED AREAS TO BE RE-VEGETATED.

CONTRACTOR SHALL SCHEDULE SITE GRADING, UTILITY INSTALLATION, AND ROADWAY CONSTRUCTION SO THAT THE GENERAL SITE CAN BE MULCHED AND RE-SEEDDED SOON AFTER DISTURBANCE. DISTURBED AREAS SHALL BE SEEDDED AND MULCHED OR SODDED WITHIN 7 DAYS

INSPECT SILT FENCES AND BALE CHECKS AFTER EACH RAIN EVENT AND DAILY DURING A PROLONGED RAINFALL. IMMEDIATELY REPAIR FAILED OR FAILING MEASURES.

REMOVE SEDIMENT DEPOSITS FROM SILT FENCE AND BALE CHECKS WHEN SEDIMENT REACHES APPROXIMATELY 1/3 THE HEIGHT OF THE BARRIER.

BARRIERS WILL BE REPLACED WHEN THEY DECOMPOSE OR BECOME INEFFECTIVE BEFORE THE BARRIERS ARE NO LONGER NECESSARY. ANY SEDIMENT REMAINING IN-PLACE AFTER THE BARRIERS ARE NO LONGER NECESSARY WILL BE DRESSED TO CONFORM TO EXISTING GRADE, AND PREPARED AND SEEDDED WITH THE APPROPRIATE SEED MIX, AS DIRECTED BY THE ENGINEER.

IN THOSE AREAS WHERE WOOD FIBER BLANKET OR OTHER SLOPE STABILIZATION METHODS HAVE FAILED, THE SLOPE SHALL BE RE-ESTABLISHED, SEED AND TOPSOIL REPLACED, AND ADDITIONAL SLOPE TREATMENT INSTALLED.

BARRIERS WILL BE REMOVED WHEN FINAL STABILIZATION OF THE SLOPES HAS BEEN COMPLETED AS DETERMINED BY THE ENGINEER.

NO STORMWATER MITIGATION MEASURES WERE REQUIRED AS A PART OF ENVIRONMENTAL, ARCHAEOLOGICAL OR OTHER REQUIRED LOCAL, STATE, OR FEDERAL REVIEW OF THIS PROJECT.

THIS PROJECT IS NOT LOCATED IN A KARST AREA NECESSITATING MEASURES TO PROTECT DRINKING WATER SUPPLY.

THIS PROJECT DOES DISCHARGE WATER TO AN IMPAIRED WATER.

PROVIDE SILT FENCE AROUND ALL SOIL STOCKPILES

SWPPP IMPLEMENTATION CHAIN OF RESPONSIBILITY

EACH CONTRACTOR ON-SITE WILL DESIGNATE AN EMPLOYEE AS ITS PROJECT SWPPP OFFICER. A LIST OF THESE OFFICERS WITH CONTACT INFORMATION WILL BE AVAILABLE ON-SITE. IT WILL BE SOLELY THE SWPPP OFFICERS' RESPONSIBILITY TO ENSURE THAT ALL ON-SITE ACTIVITIES PERFORMED BY ITS COMPANY COMPLY WITH THE SWPPP. THE GENERAL CONTRACTOR'S SWPPP OFFICER WILL HAVE AUTHORITY OVER ALL SUB-CONTRACTOR'S SWPPP OFFICERS FOR WORK PERTAINING TO COMPLIANCE.

SHOULD A SWPPP OFFICER FAIL TO ENSURE COMPLIANCE, THAT OFFICER'S FOREMAN OR DIRECT SUPERVISOR WILL ASSUME ALL RESPONSIBILITY.

SHOULD A SUB-CONTRACTOR FAIL TO COMPLY WITH THE SWPPP, THE GENERAL CONTRACTOR WILL ASSUME ALL RESPONSIBILITY FOR COMPLIANCE.

SHOULD THE GENERAL CONTRACTOR FAIL TO COMPLY WITH THE SWPPP, THE OWNER WILL ASSUME ALL RESPONSIBILITY FOR COMPLIANCE.

EROSION PREVENTION PRACTICES

CONTRACTOR SHALL PHASE CONSTRUCTION, MAINTAIN VEGETATIVE BUFFER STRIPS, AND PROVIDE HORIZONTAL SLOPE STAKING IN ORDER TO MINIMIZE EROSION.

SILT FENCE SHALL BE INSTALLED BEFORE WORK BEGINS. SILT FENCE LIMITS SHALL COINCIDE WITH DOWNGRADE GRADING LIMITS UNLESS OTHERWISE NOTED.

THIS PROJECT DOES NOT HAVE EXPOSED POSITIVE SLOPES WITHIN 200' OF SURFACE WATER.

THE WETTED PERIMETER OF DRAINAGE SWALES WILL BE STABILIZED WITH WOOD FIBER BLANKETS AND/OR DITCH CHECKS WITHIN 200' OF THE SITE BOUNDARY LINE OR WETTED PERIMETER OF DITCHES WITHIN 24 HOURS. TEMPORARY OR PERMANENT DITCHES THAT ARE BEING USED AS A SEDIMENT CONTAINMENT SYSTEM DURING CONSTRUCTION MUST BE STABILIZED WITHIN 24 HOURS AFTER NON-USE

PIPE OUTLETS MUST HAVE ENERGY DISSIPATION IN PLACE WITHIN 24 HOURS OF INSTALLATION. MULCH, HYDROMULCH, TACKIFIER, POLYACRYLAMIDE EROSION PREVENT PRACTICES CANNOT BE USED WITHIN THE NORMAL WETTED PERIMETER OF DRAINAGE DITCHES OR SWALE SECTIONS WITH A CONTINUOUS SLOPE GREATER THAN 2%

SEDIMENT CONTROL PRACTICES

CONTRACTOR SHALL FURNISH, INSTALL, AND MAINTAIN: SEDIMENT CONTROLS FOR TEMPORARY AND PERMANENT DRAINAGE BASINS AND DRAINAGE DITCHES THAT ARE A PART OF THIS DESIGN

CHECK DAMS AND/OR WOOD FIBER BLANKETS TO ENSURE SHEET FLOW AND PREVENT RILLS FOR SLOPE LENGTHS GREATER THAN 75' WITH A SLOPE OF 3:1 OR GREATER

SILT FENCE AT ALL DOWN GRADIENT PERIMETERS INSTALLED PRIOR TO ALL LAND DISTURBING ACTIVITIES

INLET PROTECTION AT ALL DRAIN INLETS

SILT FENCING AROUND TEMPORARY SOIL STOCKPILES

ROCK CONSTRUCTION SITE ENTRANCES

STREET SWEEPING OF TRACKED SEDIMENT ONTO PAVED SURFACES

SEDIMENT CONTROL PRACTICES MUST BE IN PLACE AT ALL DOWN GRADIENT PERIMETERS AND UPGRADEMENT OF ANY BUFFER ZONES

SEDIMENT CONTROL PRACTICES ARE ESTABLISHED AT THE BASE OF STOCKPILES ON DOWN GRADIENT PERIMETER

STOCKPILES ARE LOCATED OUTSIDE OF NATURAL BUFFERS OR SURFACE WATER, INCLUDING STORM WATER CONVEYANCES UNLESS THERE IS A BYPASS

THIS PROJECT DOES NOT INCLUDE DEWATERING OR BASIN DRAINING

PERMANENT SEDIMENT BASINS WILL BE USED AS TEMPORARY BASINS DURING CONSTRUCTION

ADDITIONAL BMP'S FOR SPECIAL WATERS

THIS PROJECT DOES NOT DISCHARGE TO SPECIAL WATERS OR HAVE SIGNIFICANT IMPACTS TO WETLANDS

INSPECTIONS AND MAINTAINANCE

CONTRACTOR SHALL INSPECT AND MAINTAIN MEASURES AT MINIMUM ONCE EVERY (7) DAYS DURING ACTIVE CONSTRUCTION, AND WITHIN 24 HOURS AFTER A RAINFALL EVENT OF 0.5" IN 24 HOURS.

INSPECTIONS WILL INCLUDE STABILIZED AREAS, EROSION PREVENTION AND SEDIMENT CONTROLS, AND INFILTRATION AREAS.

REFER TO MPCA'S COMPLIANCE GUIDE FOR EROSION AND SEDIMENT CONTROL FOR INSPECTION LOG REQUIREMENTS.

MAINTENANCE RECORDS SHOULD INCLUDE: DATES & TIMES IF INSPECTION, NAME OF PERSON CONDUCTING THE INSPECTION, FINDINGS & LOCATIONS OF CORRECTIVE ACTIONS, PARTY COMPLETING MAINTENANCE ACTIVITIES, DATES & AMOUNTS OF RAINFALL EVENTS GREATER THAN 0.5". RAINFALL AMOUNTS ARE TO BE RECORDED WITH RAIN GAUGE ON SITE OR WEATHER STATION WITHIN 1 MILE OF SITE. ANY DISCHARGES OBSERVED SHOULD BE DESCRIBED & PHOTOGRAPHED.

RECORDS RETENTION

CONTRACTOR SHALL MAINTAIN RECORDS OF THE SEDIMENT RETENTION PROCEDURES ON-SITE. RECORDS WILL INCLUDE:

COPY OF THE SWPPP AND ALL REVISIONS

INSPECTION AND MAINTAINANCE RECORDS

PERMANENT OPERATION AND MAINTAINANCE AGREEMENTS

CALCULATIONS FOR THE DESIGN OF TEMPORARY AND

PERMANENT STORMWATER MANAGEMENT SYSTEMS

COPIES OF THE SWPPP MUST BE RETAINED ON SITE BY THE PERMITTEE

POLLUTION PREVENTION MEASURES

SOLID WASTE: COLLECTED SEDIMENT, ASPHALT AND CONCRETE MILLINGS, FLOATING DEBRIS, PAPER, PLASTIC, FABRIC, CONSTRUCTION AND DEMOLITION DEBRIS AND OTHER WASTES MUST BE DISPOSED OF PROPERLY AND MUST COMPLY WITH MPCA DISPOSAL REQUIREMENTS.

CONCRETE AND OTHER WASHOUTS: PERFORM ALL CONCRETE TRUCK WASHOUTS IN PROPER CONTAINMENT FACILITIES. SOLID AND LIQUID WASHOUT WASTE FROM OTHER MATERIALS (STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS ETC.) WILL BE DISPOSED OF IN A PROPERLY DESIGNATED LANDFILL.

PERFORM ALL WASHOUTS INCLUDING HANDTOOLS IN A LEAKPROOF CONTAINMENT FACILITY OR IMPERMEABLE LINER THAT PREVENTS RUNOFF ONTO ADJACENT SOILS. DEBRIS/SEDIMENT WILL NOT CONTACT THE GROUND SURFACE.

A SIGNE REQUIRING USE OF PROPER WASHOUT FACILITIES WILL BE INSTALLED ADJACENT TO SAID FACILITIES.

HAZARDOUS MATERIALS: OIL, GASOLINE, PAINT AND ANY HAZARDOUS SUBSTANCES MUST BE PROPERLY STORED, INCLUDING SECONDARY CONTAINMENT TO PREVENT SPILLS, LEAKS, OR OTHER DISCHARGE. RESTRICTED ACCESS TO STORAGE AREAS MUST BE PROVIDED TO PREVENT VANDALISM. STORAGE AND DISPOSAL OF HAZARDOUS WASTE MUST BE IN COMPLIANCE THE MPCA REGULATIONS.

EXTERNAL WASHING OF TRUCKS AND OTHER CONSTRUCTION VEHICLES MUST BE LIMITED TO A DEFINED AREA OF THE SITE. RUNOFF MUST BE CONTAINED OF AND WASTE PROPERLY DISPOSED OF. NO ENGINE DEGREASING IS ALLOWED ON SITE.

SWPPP AMENDMENTS

AMENDMENTS MADE IN THE FIELD TO THE SWPPP SHOULD BE UPDATED ON THE SWPPP. REFER TO PROCEDURES OUTLINED IN SECTION 6.1 OF THE PERMIT.

SWPPP IMPLEMENTATION CHAIN OF RESPOSIBILITY

THE GENERAL CONTRACTOR SHALL PROVIDE A TRAINED, CERTIFIED, KNOWLEDGEABLE PERSON WHO SHALL SERVE AS THE SITE'S EROSION CONTROL INSPECTOR. THIS PERSON SHALL BE RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENT CONTROL BMP'S, AND SHALL MAINTAIN THE INSPECTION LOG AT THE PROJECT SITE.

EACH SUBCONTRACTOR ON-SITE WILL DESIGNATE AN EMPLOYEE AS ITS PROJECT SWPPP OFFICER. A LIST OF THESE OFFICERS WITH CONTACT INFORMATION WILL BE AVAILABLE ON-SITE. IT WILL BE SOLELY THE SWPPP OFFICERS' RESPONSIBILITY TO ENSURE THAT ALL ON-SITE ACTIVITIES PERFORMED BY ITS COMPANY COMPLY WITH THE SWPPP. THE GENERAL CONTRACTOR'S SWPPP INSPECTOR WILL HAVE AUTHORITY OVER ALL SUBCONTRACTOR'S SWPPP OFFICERS FOR WORK PERTAINING TO COMPLIANCE.

SHOULD A SWPPP OFFICER FAIL TO ENSURE COMPLIANCE, THAT OFFICER'S FOREMAN OR DIRECT SUPERVISOR WILL ASSUME ALL RESPONSIBILITY.

SHOULD A SUBCONTRACTOR FAIL TO COMPLY WITH THE SWPPP, THE GENERAL CONTRACTOR WILL ASSUME ALL RESPONSIBILITY FOR COMPLIANCE.

SHOULD THE GENERAL CONTRACTOR FAIL TO COMPLY WITH THE SWPPP, THE OWNER WILL ASSUME ALL RESPONSIBILITY FOR COMPLIANCE.

CHANGES IN PERMIT AND NOTICE OF TERMINATION

THE CONTRACTOR WILL BE A CO-PERMITTEE DURING THE CONSTRUCTION OF THE PROJECT. AFTER GRAVEL SURFACING OF THE PROJECT HAS BEEN COMPLETED, AND 70% PERMANENT VEGETATIVE COVER HAS BEEN ESTABLISHED OVER THE PVIOUS AREAS OF THE SITE, AND THE WARRANTY PERIOD HAS ELAPSED, THE CONTRACTOR MAY SUBMIT A MPCA (NOT)F ORM TO THE OWNER FOR SIGNATURE AND SUBMITTAL TO THE MPCA.

THE OWNER WILL SUBMIT THE NOTICE OF TERMINATION (NOT) AFTER ONE FINAL ESTABLISHMENT OF ALL PVIOUS SURFACES ACCORDING TO THE MPCA GENERAL PERMIT REQUIREMENTS

NOTIFICATION OF THE MPCA IN CASE OF POLLUTION

IT IS THE DUTY OF THE CONTRACTOR TO NOTIFY THE MPCA IMMEDIATELY OF ANY DISCHARGE, ACCIDENTAL, OR OTHERWISE, OF ANY SUBSTANCE OR MATERIAL UNDER HIS CONTROL WHICH, IF NOT RECOVERED, MAY CAUSE POLLUTION OF WATERS OF THE STATE, AND THE CONTRACTOR SHALL RECOVER AS RAPIDLY AND THOROUGHLY AS POSSIBLE SUCH SUBSTANCE OR MATERIAL AND TAKE IMMEDIATELY SUCH OTHER ACTION AS MAY BE REASONABLY POSSIBLE TO MINIMIZE OR ABATE POLLUTION OF WATERS OF THE STATE CAUSED THEREBY.

SEDIMENT LEAVING THE CONSTRUCTION SITE AND ENTERING A PUBLIC WATER IS CAUSE FOR NOTIFICATION.

MPCA DUTY OFFICER: 800-422-0798

QUALIFIED SWPPP PERSONNEL INFORMATION

SWPPP DESIGNER: BRIAN J. JOHNSON, PE
JONES HAUGH & SMITH, INC.
515 SOUTH WASHINGTON AVE
ALBERT LEA, MN 56007
(507) 373-4876

SWPPP INSTALLER:

NAME: _____

FIRM: _____

ADDRESS: _____

PHONE: _____

SWPPP INSPECTOR:

NAME: _____

FIRM: _____

ADDRESS: _____

PHONE: _____

GRADING CONTRACTOR:

NAME: _____

FIRM: BCM CONTRACTING

ADDRESS: _____

PHONE: _____

OTHER LAND DISTURBING CONTRACTOR:

NAME: _____

FIRM: _____

ADDRESS: _____

PHONE: _____

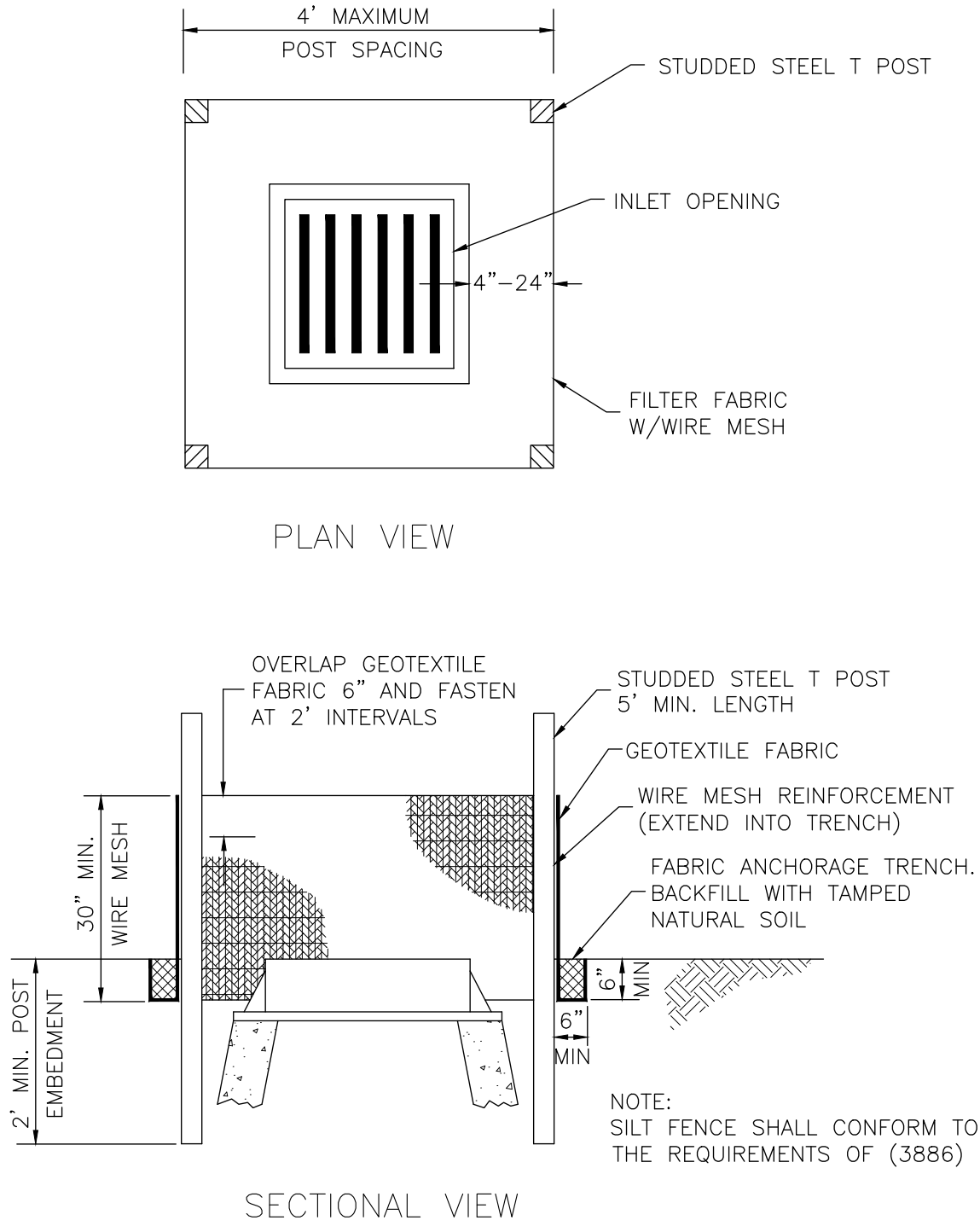
OTHER LAND DISTURBING CONTRACTOR:

NAME: _____

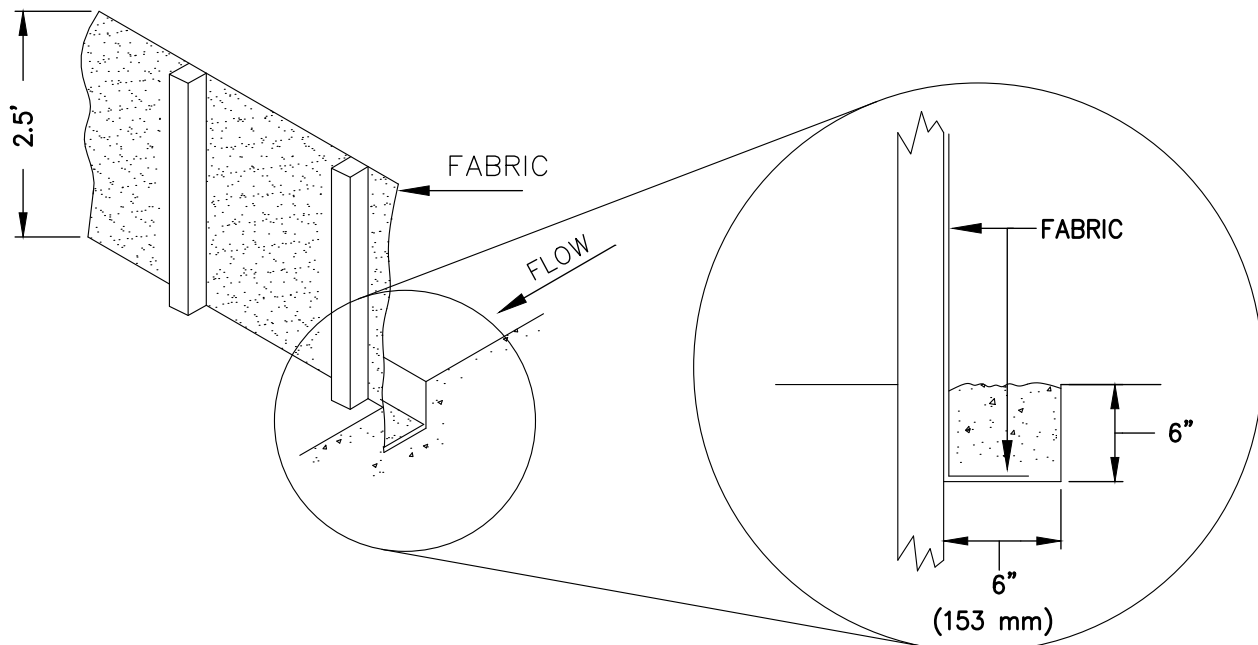
FIRM: _____

ADDRESS: _____

PHONE: _____



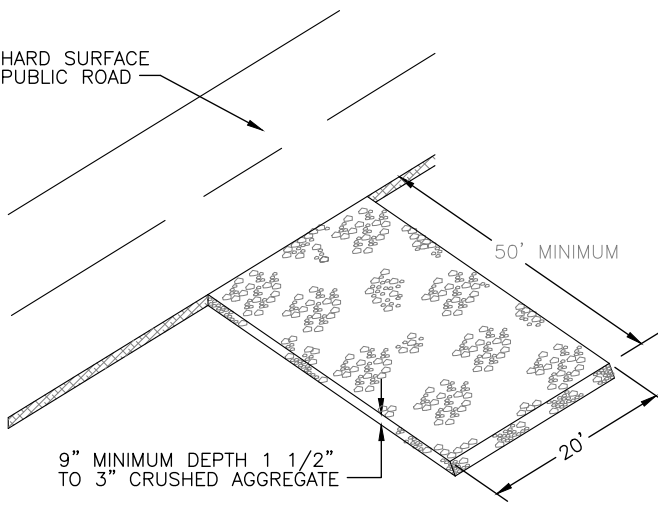
INLET PROTECTION – HEAVY DUTY



- NOTES:**
- PLACE BOTTOM EDGE OF FENCE INTO 6" (153 mm) DEEP
 - POSTS SHALL BE:
 - 4" (1.22 m) ON CENTER
 - 2" (50.8 mm) X 2" (50.8 mm) HARDWOOD, PINE OR STANDARD STEEL FENCE POSTS
 - DRIVEN 2' (0.61 m) INTO THE GROUND.

EROSION CONTROL FENCE

(MACHINE SLICED)



EROSION CONTROL PROTECTION AT CONSTRUCTION ACCESS

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Brian J. Johnson
Brien J. Johnson
Reg. No. 42744 Date: 9/20/25

JONES HAUGH SMITH
Engineers & Surveyors
515 South Washington Ave. Albert Lea, MN 56007-3734876

MANKATO APARTMENTS

Project:

Revision:

No.: Date: 9/20/2025

Drawn: **bjj** Checked:

Project Manager:

Project Status: **CD**

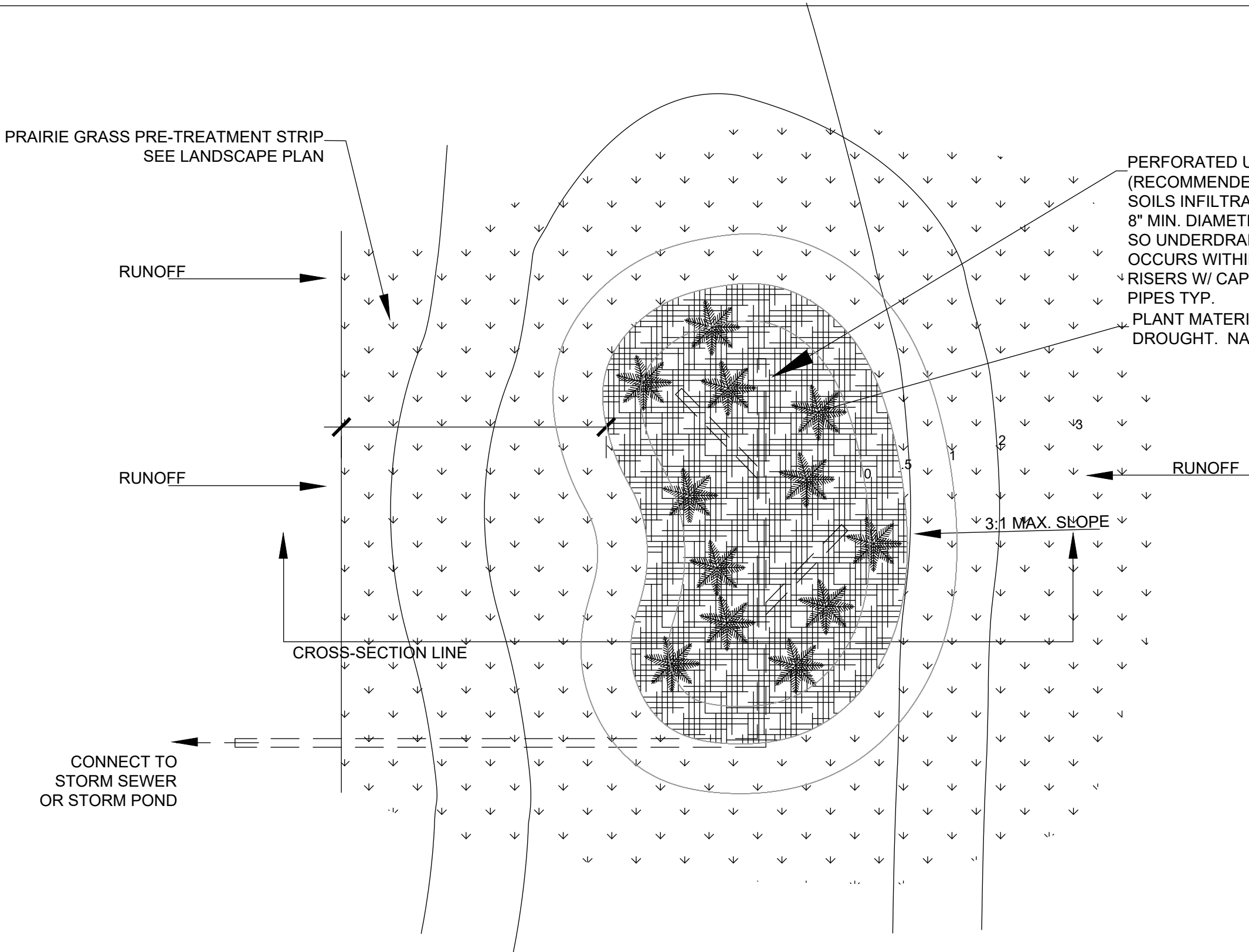
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SWPPP NARRATIVE & DETAILS

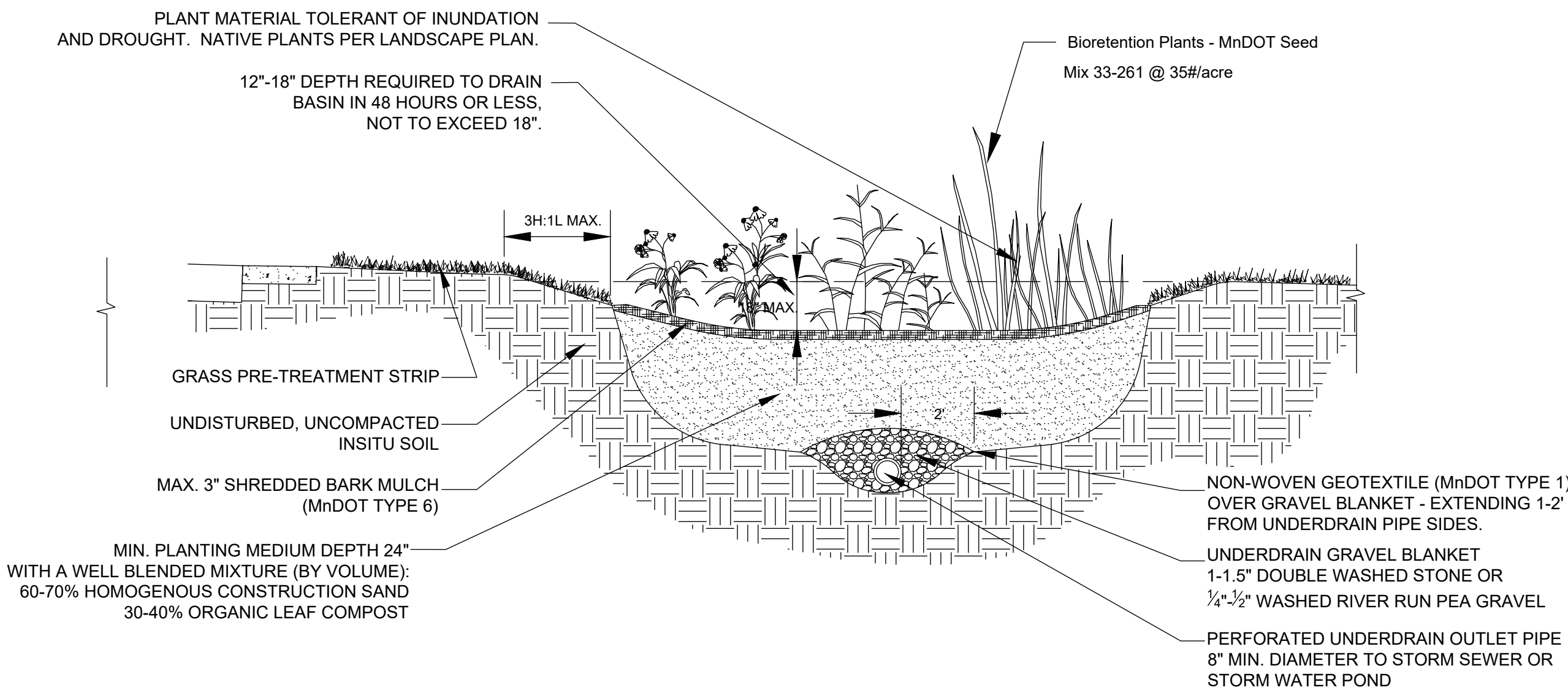
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1 MILE WETLAND RADII



PLAN VIEW: BIO-RETENTION/FILTRATION BASIN



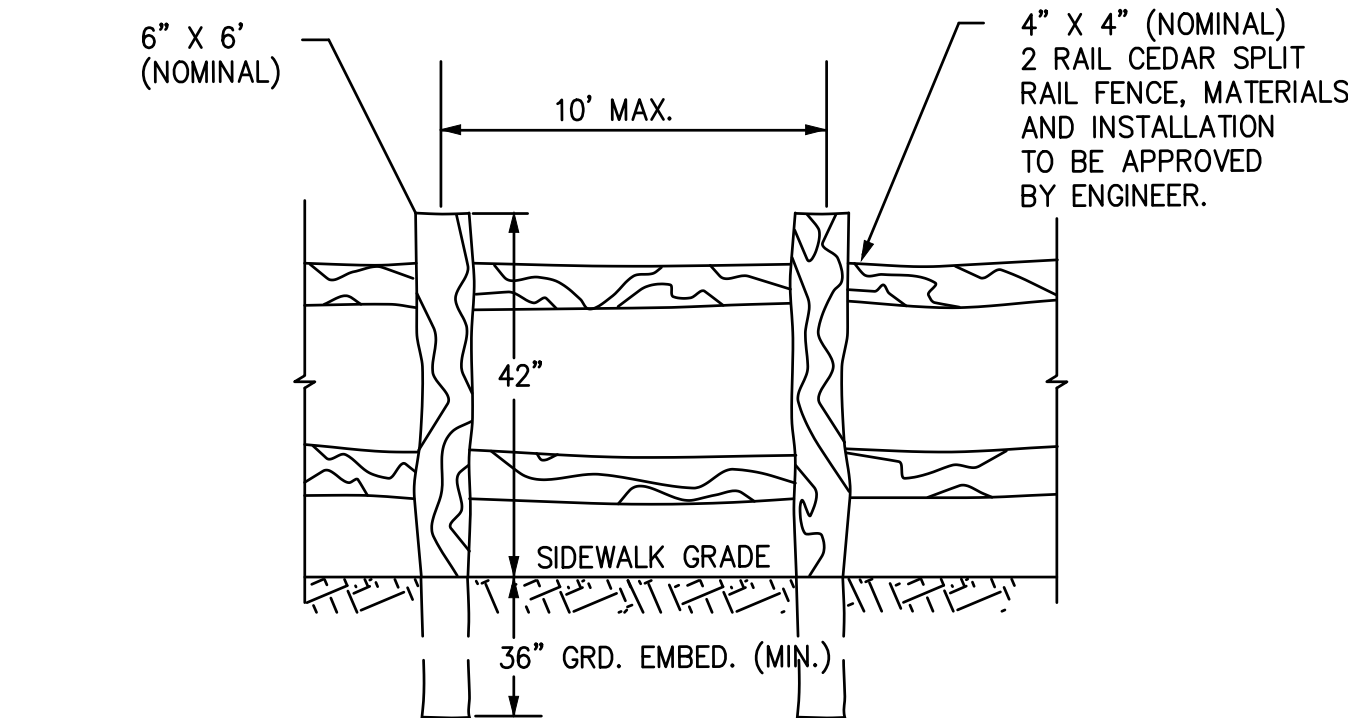
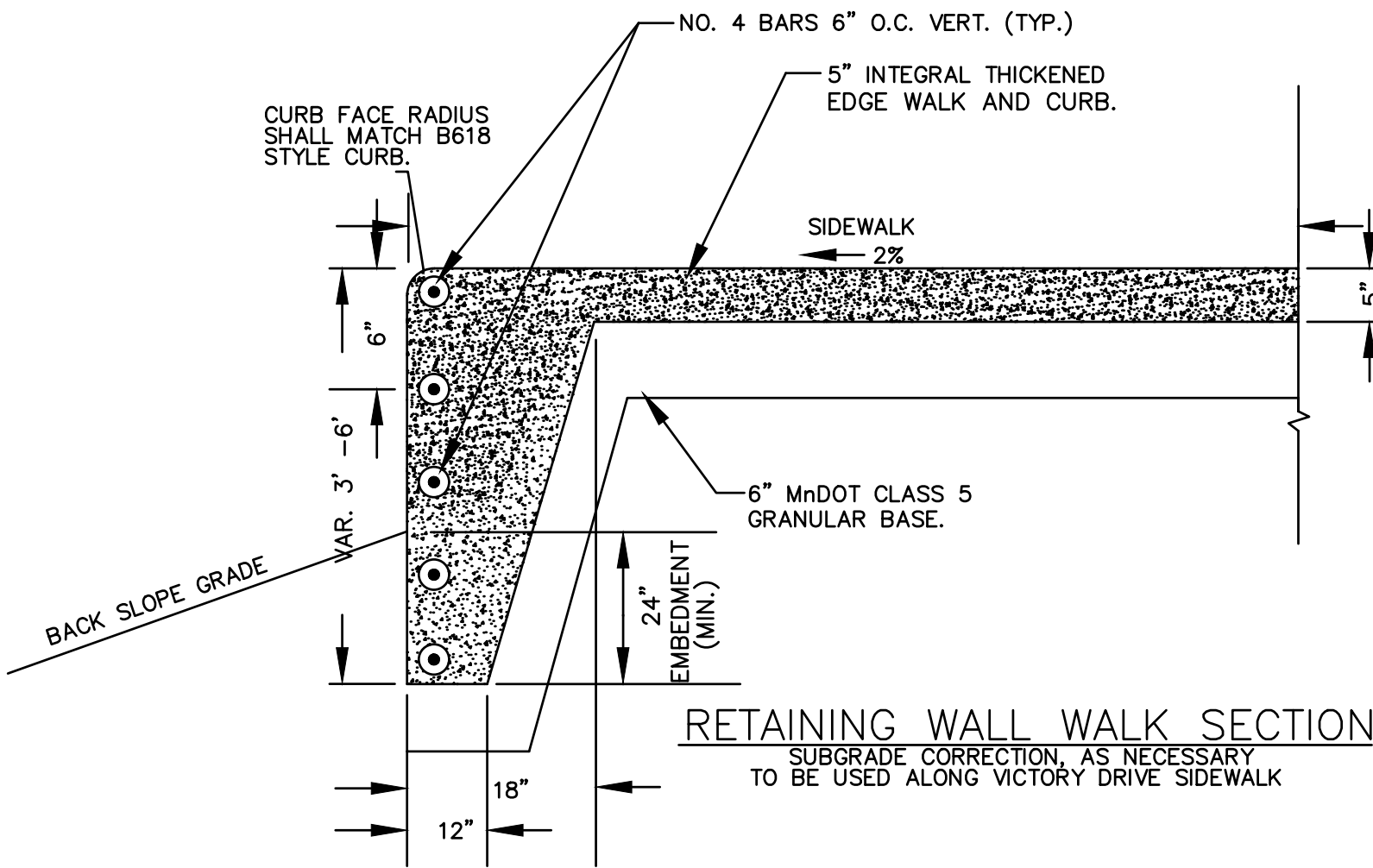
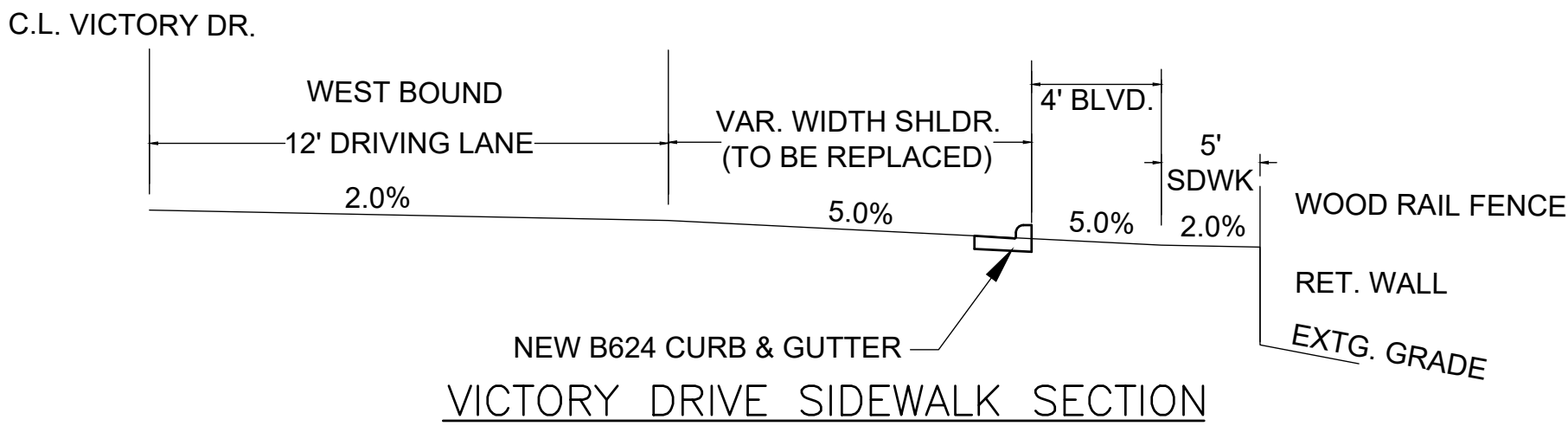
PROFILE VIEW: BIO-RETENTION/FILTRATION BASIN

BIO-RETENTION/FILTRATION BASIN CONSTRUCTION SEQUENCING

1. INSTALL SILT FENCE AND/OR OTHER APPROPRIATE TEMPORARY EROSION CONTROL DEVICES TO PREVENT SEDIMENT FROM LEAVING OR ENTERING THE PRACTICE DURING CONSTRUCTION.
2. ALL DOWN-GRADIENT PERIMETER SEDIMENT CONTROL BMP'S MUST BE IN PLACE BEFORE ANY UP GRADIENT LAND DISTURBING ACTIVITY BEGINS.
3. PERFORM CONTINUOUS INSPECTIONS OF EROSION CONTROL PRACTICES.
4. INSTALL UTILITIES (WATER, SANITARY SEWER, ELECTRIC, PHONE, FIBER OPTIC, ETC) PRIOR TO SETTING FINAL GRADE OF BIORETENTION DEVICE.
5. ROUGH GRADE THE SITE. IF BIORETENTION AREAS ARE BEING USED AS TEMPORARY SEDIMENT BASINS LEAVE A MINIMUM OF 3 FEET OF COVER OVER THE PRACTICE TO PROTECT THE UNDERLYING SOILS FROM CLOGGING.
6. PERFORM ALL OTHER SITE IMPROVEMENTS.
7. SEED AND MULCH ALL AREAS AFTER DISTURBANCE.
8. CONSTRUCT BIORETENTION DEVICE UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA.
9. IMPLEMENT TEMPORARY AND PERMENATE EROSION CONTROL PRACTICES.
10. PLANT AND MULCH BIORETENTION DEVICE.
11. REMOVE TEMPORARY EROSION CONTROL DEVICES AFTER THE CONTRIBUTING DRAINAGE AREA IS ADEQUATELY VEGETATED.

GENERAL NOTES

1. IN THE EVENT THAT SEDIMENT IS INTRODUCED INTO THE BMP DURING OR IMMEDIATELY FOLLOWING EXCAVATION, THIS MATERIAL SHALL BE REMOVED FROM THE PRACTICE PRIOR TO CONTINUING CONSTRUCTION.
2. GRADING OF BIORETENTION DEVICES SHALL BE ACCOMPLISHED USING LOW-COMPACTION EARTH-MOVING EQUIPMENT TO PREVENT COMPACTION OF UNDERLYING SOILS.
3. ALL SUB MATERIALS BELOW THE SPECIFIED BIORETENTION DEPTH (ELEVATION) SHALL BE UNDISTURBED, UNLESS OTHERWISE NOTED.
4. CONFIRM DURING CONSTRUCTION THAT THE EXISTING WATER TABLE OR BEDROCK DOES NOT EXCEED THE HEIGHT OF THE BOTTOM OF THE FILTRATION BASIN



SPLIT RAIL WOOD FENCE REQUIRED ALONGSIDE SIDEWALK INSTALLED WITH ADJACENT 4:1 OR GREATER SLOPES

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Brian Johnson
Professional Engineer
Reg. No. 42944
Date: 9/20/25

JONES HAUGH SMITH
Engineers & Surveyors
515 South Washington Ave. Albert Lea, MN 56737-4376

Consultant

MANKATO APARTMENTS

Project:

Revision:

No.: Date: 9/20/2025

Drawn: **bjj** Checked:

Project Manager:

Project Status: **CD**

Sheet Title:

DETAILS

Sheet No.:

C9

GOVERNING SPECIFICATIONS

The Minnesota Department of Transportation's "Standard Specifications for Construction" 2018 Edition, including the Mn/DOT Special Provisions modified for this project, Minnesota Plumbing Code and the City Engineers Association of Minnesota Standard Specification, 2018 Edition, will govern except as modified or altered in the Special Provisions. All references to "State of Minnesota" or "Commissioner of Transportation" or "Department" are hereby revised to mean "Owner."

WORK WITHIN PROPERTY

The Contractor will work only in areas secured by the Owner, and will comply with all requirements of access agreements.

MATERIALS TESTING

Materials Testing will be by the Contractor. The Contractor will hire an independent testing consultant, approved by the Engineer, prior to the start of work to be tested.

1. The following materials tests will be provided by the Testing Company:

Work to be Tested	Method	Reference Spec.	Testing Rate
Sewer & Water Service Trenches	Specified Density	MnDOT 2105, 2451, 2501	1 test per 500 lf
Storm Sewer Trench Compaction	Specified Density	MnDOT 2105, 2451, 2501	1 test per 500 lf
Subgrade/Embankment Compaction	Specified Density	MnDOT 2105	1 test per 2500 cy placed (Clay, Sand, etc.)
Test Rolling	Fully Loaded Dump Truck		1 test per road
Select Granular Borrow	Specified Density	MnDOT 3149	1 per 5000 ton
	Gradation	MnDOT 3149	1 per Source
Aggregate Base (CL 3, CL 5)	Modified DCP	MnDOT 2211	2 tests per 1000 ton
	Gradation	MnDOT 2211	1 per 5000 ton
Bituminous Paving	Ordinary Comp.-Control Strip	MnDOT 2360	1 control strip per mobilization and/or per workday
Concrete Curb & Gutter	Air, Slump, Temp, Strength	MnDOT 2461	If non-integrant
	Air, Temp, - 1 per day		
	Slump, Strength - 1 per day; and each time water is added at the site		
Concrete Driveway or Sidewalk	Air, Slump, Temp, Strength	MnDOT 2461	
	Air, Temp, - 1 per day		
	Slump, Strength - 1 per day; and each time water is added at the site		
Concrete Paving		MnDOT 2301	
	All Concrete Field testing or Concrete Pavement per 2012 MnDOT Schedule of Materials Control (page 32), except Pavement Texture and Smoothness.		

Table Notes:

- Specified Density also requires Moisture-Density and Relative Density
- The Engineer may omit duplicative trench compaction tests at his discretion

MAINTENANCE OF TRAFFIC (1404)

The Contractor will be responsible for traffic control on the Project, and will furnish, erect, and maintain all necessary traffic control devices required to provide safe movement of vehicular traffic through the Project. Any traffic control device installed will meet the requirements of the Minnesota Manual on Uniform Traffic Control Devices, Field Manual, latest edition, and the latest MnDOT specifications approved at the time of bid.

The Contractor will prepare and submit to the City Engineer and County Engineer for Approval a Traffic Control Plan for any work in or utilization of traveled Right-of-Way. The plan will be submitted a minimum of 48 hours prior to the commencement of work. No work in the Right-of-Way will commence without an Approved Traffic Control Plan.

Traffic control will be in accordance with the Traffic Control Layout Plan and the following:

Traffic control devices include, but are not limited to, barricades, warning signs, lane markings, trailers, flashers, cones, and drums, as required, and sufficient barricade weights to maintain barricade stability. No material will be deposited on a traveled roadway. Materials will not be placed on road right of way more than one week in advance of their use. Contractor will notify the affected parties at least one week prior to commencement of disturbance of the private or business drives. Coordination will be maintained with the Fire and Police Departments to ensure that passage is maintained for emergency vehicles at all times. The Contractor will make one person responsible for the maintenance of all signs. The Contractor will check each intersection at the end of each day whether it is a working day or not. The name and telephone number of this person will be left with the Police, the City Engineer, and the Fire Departments.

UTILITY PROPERTY AND SERVICE (1507)

Construction operations in the proximity of utility properties will be performed in accordance with the Provisions of 1507, except as modified below:

The first paragraph of 1507 is deleted and the following substituted therefore:

It will be the Contractor's responsibility to contact all local utility companies and ascertain the location of all existing underground utilities, if any, prior to performing any excavation operations. The Contractor will conduct his/her operations in the vicinity of any such facilities, which may exist, in a manner that will prevent damage thereto.

It will be the Contractor's responsibility to utilize the One-Call Excavation Notice System at 'Gopher State One Call' (1-800-252-1166) required under Minnesota Statute Chapter 216D, 48 hours prior to performing any excavation adjacent to any underground facility, which may exist, in a manner that will prevent damage thereto.

CONSTRUCTION STAKES, LINES AND GRADES (1508)

All construction staking will be provided by the Contractor and performed by or under the direct supervision of a Land Surveyor licensed in the State of Minnesota.

Field Fit Adjustments to Grade Stakes

The Engineer may make minor adjustments (< 0.5') to the grade stakes after they have been placed, in order to adjust to actual conditions in the field or to ensure proper or better drainage. Any adjustments to proposed or in-place materials required due to minor adjustments made by the Engineer are incidental to the work.

CONTROL OF HAUL ROADS (1515), LAWS TO BE OBSERVED (1701)

In addition to the requirements of 1515 and 1701, the Contractor will abide by all weight restrictions implemented by the governing road authorities in the performance of the work and in delivering materials and equipment to the project site.

AIR LAND AND WATER POLLUTION (1717)

The provisions of Mn/DOT 1717 are hereby modified and supplemented as follows:

DEWATERING

Any dewatering necessary to construct the work will be done by the Contractor. The Contractor is responsible to determine the type and method of dewatering and to provide and implement all equipment and materials necessary to accomplish the work on this project. Discharged water from dewatering will be routed through a temporary sediment basin. Sediment trapped in the temporary basins will be removed and disposed of on-site.

PROTECTION OF SURFACE STRUCTURES

The Contractor will not trespass on any private property without the express written consent of the Owner thereof. Trees, shrubs, fences, poles and all other private property will be protected unless their removal is authorized. Any property damaged will be satisfactorily restored at the expense of the Contractor. Any land survey or property monuments destroyed, covered, moved, bent or disturbed will be replaced by a Licensed Land Surveyor at the expense of the Contractor.

Wherever construction is planned to cross private property, an easement for the construction has been acquired from the property owner. The Contractor will familiarize himself with the terms of such easements, which the Owner will have on file.

Ground surface, trees, shrubbery, fences and other private property will be restored to the same condition as existed prior to the beginning of construction. This will include consolidating backfill, graveling driveways and any other leveling and landscaping required to restore the premises to original condition. The topsoil will be piled separately from subsoil material and will be replaced in the trench above the subsoil material.

Except where sodding is required, all grassed areas disturbed during the construction will be seeded following landscaping.

The Contractor will restore at his own expense streets, roads, alleys, private or public structures such as water mains, water connections and appurtenances, culverts, drain tiles, sewers, manholes, catch basins, sewer connections, curb, gutter, sidewalk, street signs, or other structures designated to remain in place which are damaged or injured in any way by his acts, and will be responsible for all damages to other utilities he may encounter.

The Contractor will not claim, or be entitled to receive, compensation for any damages sustained by reason of the inaccuracy or omission of any of the information given on the drawings relative to surface, overhead, or underground structures, or by reason of his failure to properly protect such structures.

PROTECTION OF SIDE STREETS AND HAUL ROUTES

The Contractor will be responsible for any damage of the side streets in the area and any other streets that are used as haul routes. The Contractor will discuss all haul route possibilities with the City Engineer and County Engineer prior to their use. The City Engineer, County Engineer, and the Contractor together will inspect the condition of the proposed routes before, during and after their use. The Contractor will correct any damage that is caused by the hauling activities at no cost to the Owner.

DEWATERING

Any dewatering necessary to construct the work will be done by the Contractor. The Contractor is responsible to determine the type and method of dewatering and to provide and implement all equipment and materials necessary to accomplish the work on this project. Discharged water from dewatering will be routed through a temporary sediment basin. Sediment trapped in the temporary basins will be removed and disposed of on-site.

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INTERFERENCE OF UNDERGROUND STRUCTURES

Existing utilities crossed by the new construction will be protected against damage, and/or replaced to original grade. Protection, temporary support and maintenance of existing utilities will be furnished by the Contractor at his own expense. The final installation will provide permanent support to prevent any settlement or movement, which may result in damage to these utilities.

Whenever existing pipe is replaced, the material of replacement will be DIP or PVC pipe of the same diameter as the original, long enough to extend at least one foot into the solid bank on either side of the excavation. The backfill under and around such pipe will be thoroughly compacted by mechanical means to preclude settlement. All connections between different types or sizes of pipe or improperly matched joint types will be encased in concrete with a minimum thickness of 6 inches.

Should it become necessary during the progress of the work to remove or relocate existing utilities or structures, the Owner will cause the same to be done at no expense to the Contractor, except as otherwise provided herein. The Contractor will notify those who maintain utilities sufficiently in advance of construction so they may make the necessary location, disclosure, relocation or other preparation. Where necessary to locate existing underground utilities, the Contractor, upon order of the Engineer, will make any required subsurface explorations and excavation, and will be allowed compensation therefore. Where relocation or reconstruction of existing utilities is impracticable, a change in line and/or grade of the new construction will be ordered, and the change will be made as directed. No deviation from the line or grade set by the Engineer will be made without his approval.

CONNECT TO EXISTING SANITARY SEWER

The Contractor will connect to the existing sanitary sewer at the locations shown on the plan. Exploratory excavation for determining the location of existing utilities and the connection to the existing sanitary sewer are incidental to the work. The Contractor will verify the connection elevation at the main is reasonably close to the elevation shown on the plan prior to beginning work. If the elevation is substantially different, the Contractor will notify the Owner and Engineer.

Where new connections are made to existing sanitary sewer manholes, the contractor will core drill the manhole wall and invert to the existing flow line, construct and shape a new invert for the new pipe, and provide a waterproof boot through the wall of the manhole for the new pipe.

SANITARY SEWER CONSTRUCTION REQUIREMENTS

- Noise -- The Contractor will insure all equipment is properly fitted with mufflers to reduce noise to the minimum attainable to avoid creating a nuisance in the residential and business area.
- Trench Compaction -- All trenches will be tamped using the existing material that has been excavated. Tamping will not be paid as a bid item, therefore the cost of this work will be included in the price bid for furnishing and installing the pipe.
- Piling Excavated Materials -- Excavated material will not be piled on private property without the express permission of the owner thereof, except where easements for the sewer construction or for related work have been obtained; nor will it be piled in any location that will require backfilling machinery to operate on private property. Where excavated material is piled on private property it will be placed to cause the least possible inconvenience to the property owner. Any damage caused thereby, including damage to buildings, walls, sidewalks, driveways, trees, shrubs, lawns, or any other property, will be repaired at the expense of the Contractor. Backcasting in order to minimize disturbance is incidental to the work.
- It will be the Contractor's responsibility to protect adjacent pipes in and around manholes to be reconstructed, and will replace any pipes damaged, cracked, or broken by the Contractor at their expense.
- All excavations, trenching and/or jacking and boring pits will be sheeted and/or shored as per OSHA requirements. No unsheeted trench will be left open overnight.
- Backfilling of all trenches within the limits of street excavation will comply with the provisions of Mn/DOT Specification 2112 including achieving 100% compacted density in the upper three feet of subgrade (below aggregate base) and 95% below the upper three feet. Density testing will be performed as directed by the Owner to verify compaction. Trench areas that are determined by the Owner to have yielded due to improper compaction will be deemed as Unacceptable Work and will be corrected by the contractor at no additional cost.
- Removal of former service lines. -- Service lines no longer being utilized will be removed to the main, as directed by the City. Removal and restoration of street surfacing required for the service removal is incidental.
- RECORDS OF LATERALS: The Contractor will maintain a complete and accurate record of the location and depth of each lateral. The Contractor will make measurements from the end of each service to prominent permanent features to facilitate its location in the future. The end of each lateral will be located in plan and elevation, and a sketch made to show the plan location. These records will be turned over to the Owner.
- Contractor shall televise all sewer main to be owned by the City.

MATERIALS FOR SANITARY SEWER CONSTRUCTION:

The project calls for the use of Poly-Vinyl Chloride (PVC). Pipe and fittings should be properly bedded and encased in accordance with the Standard Detail Sheets and Standard Specifications for Sanitary Sewer Installation. All 8" and larger sanitary sewer shall be SDR 35, pipe smaller than 8" shall be SDR 26 Bedding and encasement beneath, along the sides, and above the pipe will be Select Granular material, tamped in place. The only deviation will be in poor soil conditions, as approved by the Engineer, where foundation rock will be substituted. Pipe bedding is incidental to pipe installation. Foundation rock is incidental to pipe installation. Joints for PVC-SDR 35, and PVC-SDR 26 gravity sewer pipe will be made using Elastomeric gaskets conforming to the requirements of ASTM D3212. Joints in precast concrete manholes will be made using a joint compound equal to Ram-Nek or rubber gasketed conforming to ASTM C443. All manhole castings will be equipped with solid lid covers, self-sealing, with concealed pick holes. Manhole casting will be Neenah R1772, or equal and will be labeled 'SANITARY' on casting.

CONNECT TO EXISTING WATERMAIN

The Contractor will connect to existing watermain at the locations shown on the plan. All connections to existing water main are incidental to the work. All exploratory excavation in determining the location of existing water main is incidental to the work. The Contractor will coordinate with the utility owner and be responsible for any fees due for connections.

WATERMAIN CONSTRUCTION REQUIREMENTS

- Noise -- The Contractor will insure all equipment is properly fitted with mufflers to reduce noise to the minimum attainable to avoid creating a nuisance in the residential and business area.
- Bedding and encasement beneath, along the sides, and above the pipe will be Select Granular material, tamped in place. The only deviation will be in poor soil conditions, as approved by the Engineer, where foundation rock will be substituted. Pipe bedding is incidental to pipe installation. Foundation rock will be paid at the unit price per ton. No payment will be made for bedding materials which, in the opinion of the Engineer, was unnecessary for proper pipe installation.
- Trench Compaction -- All trenches will be tamped using the existing material that has been excavated. Tamping will not be paid as a bid item, therefore the cost of this work will be included in the price bid for furnishing and installing the pipe.
- Piling Excavated Materials -- Excavated material will not be piled on private property without the express permission of the owner thereof, except where easements for the sewer construction or for related work have been obtained; nor will it be piled in any location that will require backfilling machinery to operate on private property. Where excavated material is piled on private property it will be placed to cause the least possible inconvenience to the property owner. Any damage caused thereby, including damage to buildings, walls, sidewalks, driveways, trees, shrubs, lawns, or any other property, will be repaired at the expense of the Contractor.
- It will be the Contractor's responsibility to protect adjacent pipes in and around manholes to be reconstructed, and will replace any pipes damaged, cracked, or broken by the Contractor at their expense.
- All excavations, trenching and/or jacking and boring pits will be sheeted and/or shored as per OSHA requirements. No unsheeted trench will be left open overnight.
- Backfilling of all trenches within the limits of street excavation will comply with the provisions of Mn/DOT Specification 2112 including achieving 100% compacted density in the upper three feet of subgrade (below aggregate base) and 95% below the upper three feet. Density testing will be performed as directed by the Engineer to verify compaction. Trench areas that are determined by the Engineer to have yielded due to improper compaction will be deemed as Unacceptable Work and will be corrected by the contractor at no additional cost.
- The Contractor will coordinate the construction of all private and municipal utilities.
- The Contractor will be responsible for all tamping or other fees paid to public or private utilities as work incidental to the contract.
- RECORDS OF LATERALS: The Contractor will maintain a complete and accurate record of the location and depth of each water lateral. The Contractor will make measurements from the end of each service to prominent features to facilitate its location in the future. The end of each lateral will be located in plan and elevation, and a sketch made to show the plan location. These records will be turned over to the Owner.

MATERIALS FOR WATERMAIN CONSTRUCTION- City standards shall govern over all material specs listed below if discrepancies exist.

- Watermain shall be DIP meeting the requirements of AWWA C-900. Pipe and fittings should be properly bedded and encased in accordance with manufacturer's requirements. Foundation rock will be used in poor soil conditions.
- Bedding and encasement for pipe, beneath, along the sides, and above the pipe will be Select Granular material, tamped in place. The only deviation will be in poor soil conditions, as approved by the Engineer, where foundation rock will be substituted. Pipe bedding is incidental to pipe installation. All joints between pipe, fittings, valves, and hydrants will be equipped to provide electrical conductivity.
- Gaskets will be mechanical joint rubber gaskets, unless otherwise specified.
- Hydrants shall be Watertous Pacer WB-67-250 with 6" mechanical joint inlet and valve boxes as manufactured by American Flow Control Series 2500 or US Metro Pipe Seal with the Top marked WATER.
- The furnishing and installing of disinfection materials to disinfect the watermains will be the responsibility of the Contractor. The City Utilities Department will assist the Contractor in flushing and testing the watermains.
- The Contractor will use restrained joint mechanical joint flanges with mega lug retainer glands or equal on all hydrants, watermain offsets, bends, or other mechanical fittings. STAINLESS STEEL BOLTS will be required on all mechanical joints and sleeves.
- All exposed parts of the bolts and nuts will be completely coated with an approved asphaltic type rust preventive material. Any parts of the fittings that have been scrapped will also be coated with an approved asphaltic type rust preventive material. Watermain fittings will conform to ANSI Standard A21.10. All watermain fittings, hydrants and retaining rods will be protected by using sacrificial zinc anode caps such as 175P190 Protecto Caps as manufactured by Ebba Iron or an approved equal. Two caps per mechanical joint will be used.

TESTING OF WATER MAIN

Hydrostatic pressure testing of water main and services will be conducted as follows:

After the pipe has been laid, including fittings and valves and blocking, all newly laid pipe or any valved section thereof, unless directed otherwise by the Engineer, will be subject to hydrostatic pressure of 150 pounds per square inch. The duration of each such test will be at least two hours.

Each section of pipe to be tested will be filled with water and all air expelled at the highest point. The required taps to expel air or to fill the water main will be supplied and installed by the Contractor and will be 3/4 inch and will include an approved service saddle when required.

The test apparatus will be applied at the lowest elevation on the section to be tested. The apparatus will be connected to the main at a service tap or special tap location. The pressure gauge will be a standard pressure gauge. The dial will register from 0 - 200 psi and have a dial size of 4 1/2 inches with 1-psi increments.

The hydrostatic test, pressure requirement for an acceptable test will be a maximum pressure drop of 2 psi during the last hour of the two-hour pressure test. If this test requirement cannot be met, the Contractor will investigate the cause, make corrections, and retest until the pressure drop requirement can be met.

Only if several consecutive tests indicate a consistent pressure drop and only after the Contractor has made numerous attempts to resolve the problem, acceptable to the Engineer, may the Contractor request in writing and the Engineer consider the use of the leakage test. The leakage test may be performed by the Contractor to determine the magnitude of the leak, however, meeting the leakage allowance will not automatically be considered acceptance, in lieu of the pressure test, for the section being tested. Final acceptance will be at the discretion of the Engineer.

When allowed, the leakage test will be performed in accordance with AWWA C-600, Section 4.1.5, 4.1.6 and the line will be accepted as per Section 4.1.7.

Operational Testing will be conducted as follows:

At the completion of the project and in the presence of the Engineer and the Contractor, representatives of the Owner will operate all valves, hydrants, and water services to ascertain that the entire facility is in good working order; that all valve boxes are centered and valves are opened; that all hydrants operate and drain properly; that all curb boxes are plumb and centered; and that water is available at all curb stops.

Disinfection Testing:

Before being placed in service, the completed water main will be disinfected. Disinfection materials and procedures, and the collection and testing of water samples, will be in accordance with the provisions of AWWA C-651. After the final flushing the water will be tested for bacteriologic quality and found to meet the standards prescribed by the Minnesota Department of Health.

Samples will be taken and tested after 24 and 48 hours of disinfection. Both tests must be returned with passing results prior to approval for service.

Where an existing water main is out for the installation of any fitting, the pipe and fittings proposed to be installed will be disinfected prior to installation as follows:

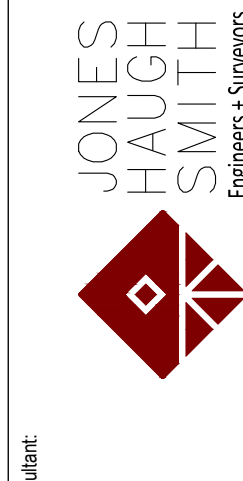
The interior of the pipe and fittings will be cleaned of all dirt and foreign material.

The interior of the pipe and fittings will be thoroughly swabbed or sprayed with a 1 percent minimum hypochlorite solution.

Unless otherwise indicated in the Plans, Specifications, and Special Provisions, the Contractor will furnish all materials and perform the disinfecting, flushing, and testing as necessary for meeting the water quality requirements.

The flushing operations and the form of chlorine and method of application to be used will be subject to approval by the Engineer.

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
Brian J. Johnson
Brian J. Johnson
Reg. No. 42744
Date: 9/20/25



Consultant:

Project:

MANKATO
APARTMENTS

Revision:

No.:
Drawn: **bij**
Date: **9/20/2025**
Checked:

Project Manager:

Project Status: **CD**

Sheet Title:

SPECIFICATIONS

Sheet No.:

C10

