

SWM CONCEPT, DEVELOPMENT AND IMPROVEMENT PLAN

SUBMISSION CHECKLIST

--Plan Title shall be “ SWM CONCEPT, DEVELOPMENT AND IMPROVEMENT PLAN”

--Site and Resource Mapping:

Table 5.1 page 5.7 of SWM design Manual (Discussion of protection & enhancing natural resources present onsite)

--Site Fingerprinting and Development Layout:

- Determine approx. location of buildings, roadways, parking lots and other impervious areas.
- Location of ESD practices

--Better Site Design Technique:

- Discuss one by one all techniques listed in table 5.2

--Proposed topography

--Proposed SWM volume requirements for ESD targets and quantity control.

--The location and size of ESD practices used to the MEP and all nonstructural, alternative surfaces, and micro-scale practices used.

--An overlay plan showing the location of SWM ESD practices and proposed erosion and sediment controls.

-Development detail and site data including site area, disturbed area, new impervious area, and total impervious area.

--Existing and proposed drainage areas.

- Representative Cross sections and details (existing and proposed structure elevations and water surface elevations).
- The locations of existing and proposed structures.
- Construction specifications.
- Operation and maintenance plans.
- As-Built design certification block.
- Inspection schedule.
- Easements and right of way.
- Certification by the owner/developer that all construction will be done according to the plan.
- Final erosion and sediment control plans.
- SWM Facility sizing table.
- Stormwater management design report including:
 - A narrative to support the final design and demonstrate that ESD will be achieved to MEP.
 - Table showing ESD and Unified Sizing Criteria.
 - Hydrology and hydraulic analysis of the stormwater management system for applicable sizing criteria.
 - Final sizing calculations for stormwater controls including drainage area, storage, discharge points.
 - Final analysis of stable conveyance to downstream discharge points.
 - Geotechnical investigations report including soil maps, borings, and site-specific recommendations.



Division of Planning and Permitting
Department of Development
Review Engineering
APPROVED: 08/07/22

Signature:

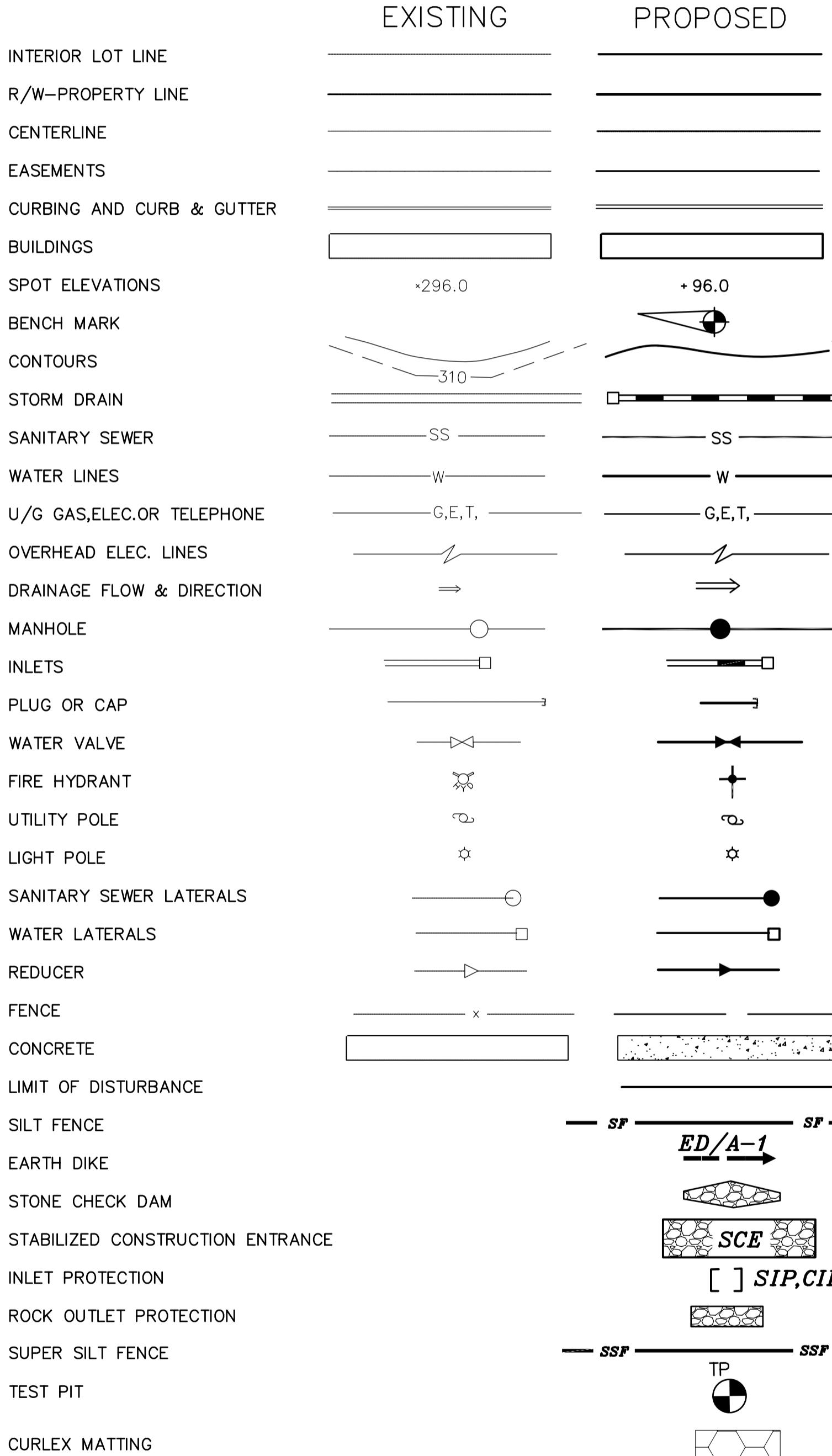
PLAN TITLE:

SWM CONCEPT/DEVELOPMENT/IMPROVEMENT PLAN

FOR

JEFFERSON TECHNOLOGY PARK

LEGEND



FACILITY SIZING TABLE:

PRIVATE UTILITY NOTE:

NOTE:
UPON APPROVAL OF THE IMPROVEMENT PLANS AND PRIOR TO ISSUANCE OF THE GRADING PERMIT, A PLUMBING PERMIT THAT COVERS ON SITE PRIVATE WATER, SEWER AND STORM DRAIN UTILITY WORK IS REQUIRED. THE APPLICATION MUST BE APPROVED PRIOR TO THE START OF CONSTRUCTION FOR ALL PROPOSED PRIVATE PORTION OF UTILITIES INCLUDING STORM DRAINS, WATER AND SEWER LINES, MONITORING MANHOLES, HYDRANTS, AND ANY OTHER ON-SITE PRIVATE UTILITY WORK. APPLICATIONS CAN BE SUBMITTED BY THE FREDERICK COUNTY LICENSED UTILITY CONTRACTORS VIA THE CITIZEN PORTAL. PLANNINGANDPERMITTING.FREDERICKCOUNTYMD.GOV

LOT B-1 W/SS CONTRACT # 342D1-SW

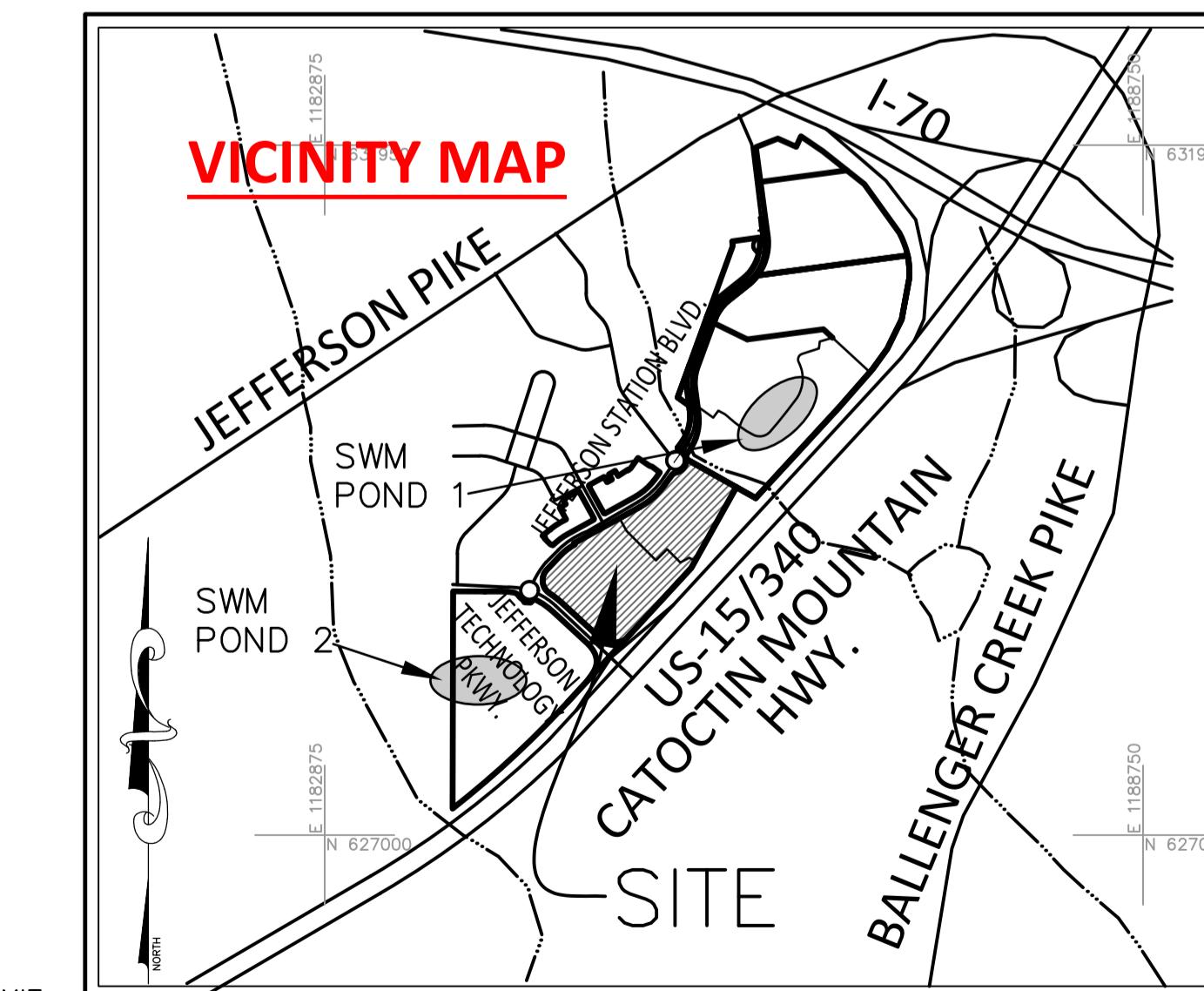
LOT B-2 W/SS CONTRACT # 342D2-SW

MAY 2022

PREPARED FOR:

**HARRIS
SMARIGA**
PLANNERS • ENGINEERS • SURVEYORS

125 S. CARROLL STREET
SUITE 100
FREDERICK
MARYLAND 21701
P. 301.662.4488
F. 301.662.4906
www.harrissmariga.com



PROJECT DETAILS:

PROJECT DESCRIPTION:
THE PURPOSE OF THESE PLANS IS FOR THE CONSTRUCTION OF A ONE STORY BUILDING FOR LABORATORY RESEARCH/EXPERIMENTAL/TESTING USE ON LOT B-1 AND CONSTRUCTION OF A 3 STORY BUILDING FOR LABORATORY RESEARCH/EXPERIMENTAL/TESTING/OFFICE USE ON LOT B-2. SITES PREVIOUSLY MASS GRADED PER PLANS AP#4011. SWM FOR SITES TO BE PROVIDED IN FUTURE "SWM POND 1" AND "SWM POND #2" (CURRENTLY ACTING AS SEDIMENT BASINS) PER PLANS AP#4011.

NOTE:
THE SITE HAS WATER & SEWER CLASSIFICATIONS W-3, S-3 AND IS SERVED BY WATER AND SEWER.

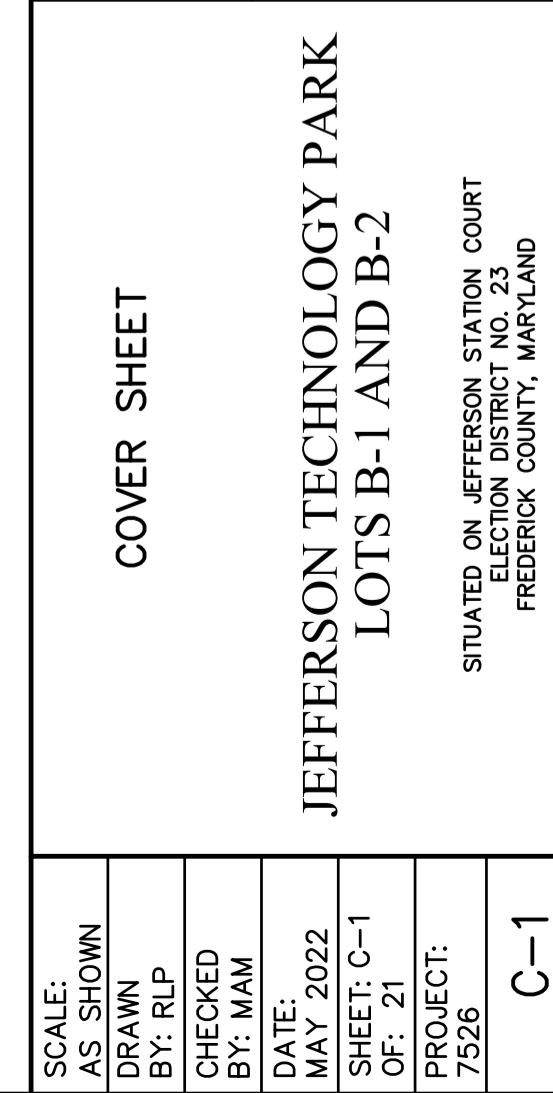
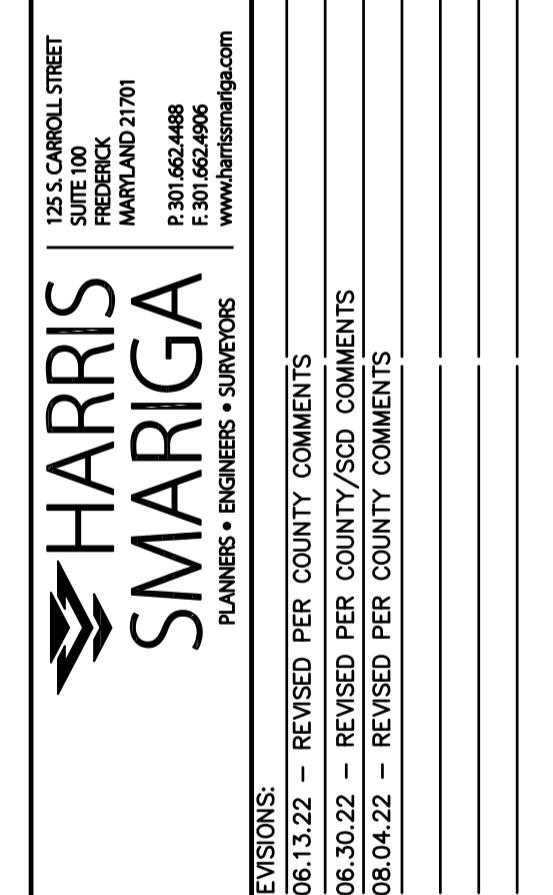
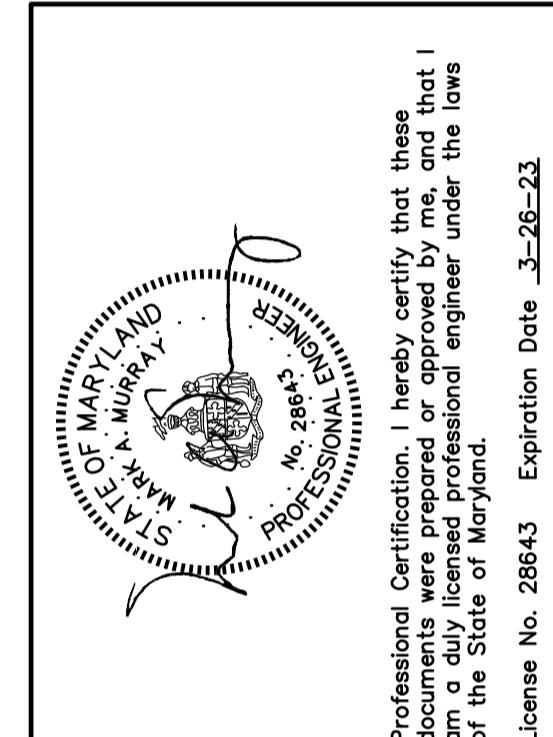
NOTE:
NO FLOODPLAIN HEREON PER FEMA FLOOD INSURANCE MAP #24021C0289D, DATED SEPT. 19, 2007 AND NO WETLANDS SINCE SITE HAS BEEN MASS GRADED.

NOTE:
300 GPM ESTIMATED DOMESTIC WATER DEMAND
1500 GPM ESTIMATED SPRINKLER DEMAND WITH 50 PSI FROM THE STREET
500 GPM ESTIMATED HOSE STREAM ALLOWANCE

SHEET INDEX

Sheet List Table	
Sheet Number	Sheet Title
C-1	COVER SHEET
C-2	TYPICAL SECTIONS NOTES AND DETAILS
C-3	OVERALL PLAN
C-4	GRADING AND STORM DRAIN PLAN -1
C-5	GRADING AND STORM DRAIN PLAN -2
C-6	DIMENSION, PAVING AND UTILITY PLAN -1
C-7	DIMENSION, PAVING AND UTILITY PLAN -2
C-8	WATER AND SEWER PROFILES - 1
C-9	WATER AND SEWER PROFILES - 2
C-10	WATER AND SEWER PROFILES - 3
C-11	WATER AND SEWER DETAILS - 1
C-12	WATER AND SEWER DETAILS - 2
C-13	STORM DRAIN PROFILES - 1
C-14	STORM DRAIN PROFILES - 2
C-15	SEDIMENT AND EROSION CONTROL PLAN - 1
C-16	SEDIMENT AND EROSION CONTROL PLAN - 2
C-17	SEDIMENT EROSION CONTROL NOTES AND DETAILS
C-18	LANDSCAPE PLAN - 1
C-19	LANDSCAPE PLAN - 2
C-20	LANDSCAPE SCHEDULES AND DETAILS
C-21	PHOTOMETRIC PLAN

(PROJECT NOTES COULD
BE HERE OR ON 2ND
SHEET)





Division of Planning and Permitting
Department of Development
Review Engineering

APPROVED: 08/07/22

Signature:

GENERAL NOTES

- HORIZONTAL DATUM IS (NAD83/91) BASED ON FREDERICK COUNTY CONTROL STATIONS "VALLEY" AND "VALLEY 2".
- VERTICAL DATUM IS (NAVD 88) BASED ON FREDERICK COUNTY CONTROL STATIONS "VALLEY" AND "VALLEY".
- TOPOGRAPHY IS ASBUILT BY HARRIS, SMARIGA & ASSOCIATES, INC. DECEMBER 2019.
- EXISTING UTILITIES ARE SHOWN FROM AVAILABLE RECORDS AND SHOULD BE CONSIDERED APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY ALL LOCATIONS AND ELEVATIONS PRIOR TO CONSTRUCTION. ANY UTILITY (WHETHER SHOWN OR NOT) DAMAGED DUE TO CONSTRUCTION, WHETHER REMOVED OR DESTROYED, HYDRAULICS, MANHOLES, ETC. TO BE RAISED OR LOWERED ARE TO BE DONE SO BY CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND REPLACING ANY EXISTING FENCE, GATE, ETC. THAT IS REMOVED. CONTRACTOR SHALL REMOVE ALL OFF SITE DISTURBED AREAS AS SHALL BE RETURNED TO THEIR ORIGINAL CONDITION.
- WHEN WORKING IN THE AREA OF ANY EXISTING GAS LINE, THE CONTRACTOR SHALL HAVE THE WASHINGTON GAS COMPANY (301-662-2151) VERIFY THAT NO LEAKS EXIST PRIOR TO CONSTRUCTION. ANY UTILITY THAT MUST BE PRESENT AT THE PROJECT SITE AND THAT FEEDS GAS LINES AND EXCAVATION WITH 5 FEET OF GAS LINES SHALL BE DONE BY HARRIS, SMARIGA & ASSOCIATES, INC. OR THE DEVELOPER'S REPRESENTATIVE SHALL OBTAIN APPROVAL FROM THE GAS COMPANY FOR ANY WORK WITHIN A GAS LINE EASEMENT AREA.
- SUBGRADE PREPARATION FOR PRIVATE PAVED AREAS:

A. FILL AREAS TO BE PAVED SHALL HAVE SOIL PLACED IN 8 INCH LIFTS AND COMPACTED TO 95 PERCENT OF MAXIMUM DENSITY. THE LAST TWO LIFTS SHALL BE COMPACTED TO 100 PERCENT OF MAXIMUM DENSITY. MAXIMUM DENSITY SHALL BE DETERMINED IN ACCORDANCE WITH AASHTO T-99 METHOD C.

B. AFTER THE SUBGRADE IS PREPARED, FILLS HAS BEEN FINALLY SHARED TO THE SPECIFIED DENSITY, THE FILLS SHALL BE CAPTURED AND THOROUGHLY PROBED WITH A 20 TON ROLLER OR EQUIVALENT TO DETERMINE SOFT OR UNSUITABLE AREAS. PRIOR TO PAVING, SOFT OR UNSUITABLE AREAS SHALL BE REMOVED AND BACK FILLED WITH SUITABLE MATERIAL TO THE REQUIREMENTS OF ITEM "A" ABOVE.

C. NO PAVEMENT SHALL BE PLACED ON FROZEN SUBGRADES NOR SUBGRADES THAT WILL NOT ADEQUATELY SUPPORT THE PAVEMENT.

D. IF ROCK IS ENCOUNTERED IN THE SUBGRADE, REMOVE AN ADDITIONAL 6 INCHES BELOW SUBGRADE AND BACK FILL WITH SUITABLE MATERIAL TO THE REQUIREMENTS OF ITEM "A" ABOVE.

E. CONTRACTOR SHALL TEST PIT IN THE AREA OF KNOWN EXISTING UTILITIES TO VERIFY SIZE, LOCATION AND TYPE PRIOR TO PERFORMING ANY WORK. UTILITY RELOCATIONS, WHETHER SHOWN ON THE PLANS OR DISCOVERED IN THE FIELD, ARE THE RESPONSIBILITY OF THE OWNER. PRIOR TO PERFORMING ANY WORK, THE OWNER AND THE CONTRACTOR SHALL NEGOTIATE A COST FOR DISCOVERED UTILITY WORK.

F. CONTRACTOR SHALL NOTIFY MISS UTILITY 1-800-257-7777 (A MINIMUM OF 5 WORKING DAYS) AND THE FREDERICK COUNTY DPR (ENVIRONMENTAL CONFORMANCE SECTION) AT 301-600-3507 (48 HOURS) PRIOR TO CONSTRUCTION.

G. ALL CONSTRUCTION TO CONFORM WITH THE LATEST EDITION OF THE MARYLAND COUNTY STANDARDS AND SPECIFICATIONS. SHOWN THE DRAWINGS, WHETHER WITH THEMSELVES OR WITH THE SPECIFICATIONS, THE BETTER QUALITY OR GREATER QUANTITY OF WORK OR MATERIALS SHALL BE USED FOR BIDDING THE WORK AND SHALL BE PROVIDED BY THE CONTRACTOR.

H. ALL SEWER AND WATER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE FREDERICK COUNTY DEPARTMENT AND FREDERICK COUNTY PLUMBING CODE.

I. WHEN REMOVING EXISTING CURB, GUTTER, OR SIDEWALK, REMOVE TO THE NEAREST JOINT.

J. GUTTERS AND PAVING SHALL BE INSTALLED IN SUCH A MANNER AS TO INSURE POSITIVE DRAINAGE IN ALL AREAS. AS SHOWN, THE CONTRACTOR SHALL STRING LINE THE CURB PROFILE AND REPORT ANY IRREGULAR HIGH, LOW, AND/OR FLAT AREAS TO THE ENGINEER FOR CORRECTION PRIOR TO CONCRETE POUR. STANDARD GUTTER CROSS SLOPE SHALL BE REVERSED TO SLOPE AWAY IN SOME AREAS TO CONFORM TO PROPOSED GRADING AS SHOWN ON PLANS.

K. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING SILT AND DEBRIS OUT OF THE EXISTING STORM DRAIN SYSTEM DURING CONSTRUCTION AND SHALL CLEAN THE SYSTEM THOROUGHLY PRIOR TO FINAL ACCEPTANCE BY THE COUNTY AND THE OWNER.

L. HARRIS, SMARIGA & ASSOCIATES, INC. IS NOT RESPONSIBLE FOR THE CONTRACTOR'S UTILIZATION OF MEN, MATERIALS, EQUIPMENT, OR SAFETY MEASURES IN PERFORMANCE OF ANY WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTRACTOR'S SAFETY FOR PERFORMING THE WORK CORRECTLY AND IN CONFORMANCE WITH ALL CODE REQUIREMENTS.

M. HARRIS, SMARIGA & ASSOCIATES, INC. HAS NOT PERFORMED ANY SUBSURFACE INVESTIGATION TO DETERMINE LOCATIONS OF ROCK, DIFFERENT SOIL TYPES, WATER TABLE, UTILITIES, ETC. BLASTING IS REQUIRED, CONTRACTOR MUST SUBMIT A BLASTING PLAN SHOWING AND SIGNING A PROFESSIONAL ENGINEER FOR APPROVAL BEFORE ANY BLASTING CAN BEGIN ON-SITE.

N. SHOULD THE CONTRACTOR DISCOVER DISCREPANCIES BETWEEN THE PLANS AND FIELD CONDITIONS, THE ENGINEER IS TO BE NOTIFIED IMMEDIATELY TO RESOLVE THE SITUATION. SHOULD THE CONTRACTOR AND/OR OWNER MAKE FIELD CORRECTIONS OR ADJUSTMENTS WITHIN THE FIELD, THE ENGINEER, THEN THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR THOSE CHANGES.

O. THE CONTRACTOR SHALL NOTE THAT IN THE CASE OF A DISCREPANCY BETWEEN THE SCALED AND FIGURED DIMENSIONS SHOWN ON THESE PLANS, THE FIGURED DIMENSION SHALL GOVERN.

P. IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NATURALLY BE REQUIRED TO COMPLETE THE PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PERFORM SUCH WORK.

Q. FIELD ADJUSTMENTS SHALL BE MADE AS NECESSARY TO PROVIDE A SMOOTH TRANSITION BOTH VERTICALLY AND HORIZONTALLY FROM EXISTING TO PROPOSED PAVING SECTION.

R. SOME AREAS OF THE MONOCACY VALLEY HAVE KNOWN LIMESTONE FORMATIONS WITH SOLUTION CAVITIES (SINKHOLE). HARRIS, SMARIGA & ASSOCIATES RECOMMENDS THAT THE CONTRACTOR AND THE ENGINEER TEST FOR THE EXISTENCE OF THESE CONDITIONS DURING CONSTRUCTION. THE GEOTECHNICAL ENGINEER SHALL RECOMMEND CORRECTIVE MEASURES IF SOLUTION CAVITIES ARE ENCOUNTERED.

S. CONTROL BLASTING PROCEDURES, IF NECESSARY, TO MINIMIZE OVERBLASTING AND THE FORMATION OF NEW OPENINGS IN THE ROCK.

T. ALL EARTHWORK IN THE PROJECT AREA SHOULD BE GRADED TO DRAIN AT ALL TIMES TO DESIGNATED STORMWATER FACILITIES. UPON COMPLETION OF THE DAILY EARTHWORK OPERATIONS, THE SURFACE EARTHWORK SHOULD BE TYPED BY DREDGE TO MINIMIZE ANY INFLUENCE OF PRECIPITATION AND FACILITATE THE RUNOFF OF SURFACE WATER.

U. IN AREAS WHERE ROCK IS EXCAVATED, A GEOTECHNICAL ENGINEER AND ENGINEERING GEOLIST SHALL BE PERMITTED TO EXAMINE THE EXCAVATED SURFACE FOR ANY EXISTING SOLUTION FEATURES. AFTER COMPLETE EXAMINATION OF THE EXPOSED ROCK SURFACE, THE CONTRACTOR SHALL FILL AND RECOMPACTION THE SURFACE AND SEAL ALL EXPOSED ROCK SURFACES AND RETURN THOSE PORTIONS OF THE PROJECT SITE TO PLANNED SUBGRADE LEVELS.

V. ALL EXPOSED SUBGRADE SOILS IN THE STRUCTURAL AND PAVEMENT AREAS MUST BE PROOF ROLLED AND DENSIFIED IN-PLACE WITH APPROVED COMPACTION EQUIPMENT.

W. ALL MAINTENANCE OF TRAFFIC, SIGNAGE, AND PAVEMENT MARKINGS SHALL COMPLY WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, MARYLAND EDITION AND MSHA'S TESTED STANDARDS AND SPECIFICATIONS. MATERIALS SHALL COMPLY WITH THE MARYLAND STANDARDS AND SPECIFICATIONS.

X. ALL STANDARD DETAILS AND STANDARD PLATES REFERRED TO ON THESE PLANS SHALL BE IN ACCORDANCE WITH MSHA'S "BOOK OF STANDARDS FOR HIGHWAY & INCIDENTAL STRUCTURES" OR FREDERICK COUNTY STANDARD DETAILS AND THE LATEST REVISION THERETO.

Y. EXCAVATION WITHIN A COUNTY ROAD RIGHT-OF-WAY WILL NOT BE ALLOWED WITHOUT OBTAINING A PERMIT FROM THE FREDERICK COUNTY DIVISION OF HIGHWAY OPERATIONS FOR THE INSTALLATION OF UTILITIES, STORM DRAINS, ETC. TELEPHONE NUMBER IS 301-600-1564.

Z. NO FLOODPLAIN HERON FOR FEMA FLOOD INSURANCE MAP #24021C02890, DATED SEPT. 19, 2007 AND NO WETLANDS SINCE SITE HAS BEEN MASS GRADED.

AA. TRASH TO BE PICKED UP BY A PRIVATE CONTRACTOR AT THE DUMPSTER LOCATION SHOWN ON THE PLAN.

AB. FOR FINAL POLE LOCATIONS AND CONDUIT ROUTING, SEE ELECTRICAL PLAN PREPARED BY ELECTRICAL POWER SUPPLIER.

AC. PROVIDE DEPRESSED CURB AND HANDICAP RAMPS AT ALL ROAD AND STREET INTERSECTIONS WITH CURB AND SIDEWALK AND AT ALL HANDICAP PARKING SPACES. PROVIDE HANDICAP SIGNS AT EACH HANDICAP PARKING SPACE. ALL CONSTRUCTION SHALL CONFORM TO STATE AND FEDERAL STANDARDS FOR HANDICAP AND THE AMERICANS WITH DISABILITIES ACT (ADA). AND WHERE APPROPRIATE, THE CITY OF FREDERICK STANDARD SPECIFICATIONS AND DETAILS, LATEST EDITIONS. CONTRACTOR TO VERIFY SLOPES AND ELEVATIONS OF THE FORMS USED FOR HC SIDEWALK AND RAMPS FOR COMPLIANCE WITH THE MARYLAND CONSTRUCTION CODE AND THE ADA. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SLOPES FOR COMPLIANCE. IF THE ABOVE STATED VERIFICATION IS NOT IN COMPLIANCE, HARRIS, SMARIGA & ASSOC. INC. IS TO BE NOTIFIED AT LEAST 24 HOURS PRIOR TO CONCRETE PLACEMENT.

ATTACHMENT "E" PRECAST MATERIAL ACCEPTANCE POLICY EFFECTIVE DATE: JANUARY 1, 2002 REVISED FEBRUARY 6, 2003 AND SEPTEMBER 23, 2003.

PAVING NOTES

- ALL PRECAST CONCRETE STORM DRAINAGE STRUCTURES, MANHOLE COVERS, AND INLET GRATES TO BE INSTALLED IN CONJUNCTION WITH STORM DRAIN SYSTEMS WITHIN PUBLIC STREET RIGHTS OF WAY INTENDED TO BE DEDICATED AND ACCEPTED INTO THE FREDERICK COUNTY PUBLIC STREET SYSTEM SHALL COMPLY WITH MSHA'S STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, LATEST EDITION, (UNLESS NOTED OTHERWISE).
- ELEVATIONS ON PLAN REFERENCED EDGE-OF-PAVEMENT OR GUTTER FLOW LINE AT CURB FACE UNLESS OTHERWISE SHOWN.
- FIELD ADJUSTMENTS CONFORMING TO APPROPRIATE DESIGN STANDARDS SHALL BE MADE AS NECESSARY TO PROVIDE A SMOOTH TRANSITION BOTH VERTICALLY AND HORIZONTALLY FROM EXISTING TO PROPOSED PAVING SECTION.
- GUTTERS AND PAVING SHALL BE INSTALLED IN SUCH A MANNER AS TO INSURE POSITIVE DRAINAGE IN ALL AREAS AS SHOWN.
- ALL CURB & GUTTER SHALL BE PER CURB & GUTTER DETAILS, SHOWN ON THESE PLANS.
- SUBGRADE PREPARATION FOR PAVED AREAS:

A. FILL AREAS TO BE PAVED SHALL HAVE SOIL PLACED IN 8 INCH LIFTS AND COMPACTED TO 95% OF MAXIMUM DENSITY. THE LAST TWO LIFTS SHALL BE COMPACTED TO 100% OF MAXIMUM DENSITY. MAXIMUM DENSITY SHALL BE DETERMINED IN ACCORDANCE WITH AASHTO T-180.

B. BE ACCOMPANIED BY A CERTIFICATION FROM THE PRODUCER, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER CURRENTLY LICENSED AND REGISTERED IN THE STATE OF MARYLAND, THAT THE MATERIALS SUPPLIED COMPLY WITH THE CONTRACT DOCUMENTS AND MSHA SPECIFICATIONS.

C. NO PAVEMENT SHALL BE PLACED ON FROZEN SUBGRADES NOR SUBGRADES THAT WILL NOT ADEQUATELY SUPPORT THE PAVEMENT.

D. IF ROCK IS ENCOUNTERED IN THE SUBGRADE, REMOVE AN ADDITIONAL 6 INCHES BELOW SUBGRADE AND BACKFILL WITH SUITABLE MATERIAL TO THE REQUIREMENTS OF ITEM "A" ABOVE.

E. THE CEMENT TREATED AGGREGATE IS DEPENDENT ON THE CBR TEST RESULTS FROM ON SITE TESTING. THE FINAL MIX DESIGN MUST BE APPROVED BY THE GEOTECHNICAL ENGINEER BASED ON TEST RESULTS AND FIELD OBSERVATIONS.

F. EXISTING PAVEMENT SHALL BE CLEANED AND TACK COATED TO INSURE PROPER COATING WITH THE CONSTRUCTION. ALL EXISTING SIDEWALK, CURB & GUTTER SHALL BE REMOVED AND RELOCATED AS NECESSARY. PAVEMENT, SIDEWALK, CURB & GUTTER SHALL MATCH EXISTING BOTH HORIZONTALLY AND VERTICALLY PROVIDING A SMOOTH TRANSITION.

G. THE CEMENT TREATED AGGREGATE IS DEPENDENT ON THE CBR TEST RESULTS FROM ON SITE TESTING. THE FINAL MIX DESIGN MUST BE APPROVED BY THE GEOTECHNICAL ENGINEER BASED ON TEST RESULTS AND FIELD OBSERVATIONS.

H. EXISTING PAVEMENT SHALL BE SCRIBED AND TACK COATED PRIOR TO PLACEMENT OF ANY OVERLAPPING PAVING. THE EXISTING PAVING MUST BE REMOVED SO THAT THE SURFACE COURSE TIES IN SMOOTHLY WITH EXISTING SURFACES TO REMAIN. THE DEPTH OF THE TRIMMING GRINDING FOR THE TIE-IN SHALL VARY AT A RATE OF 1" VERTICALLY TO 50" HORIZONTAL AS DIRECTED BY THE PERMIT INSPECTOR.

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R. EXISTING PAVEMENT SHALL BE SCRIBED AND TACK COATED PRIOR TO PLACEMENT OF ANY OVERLAPPING PAVING. THE EXISTING PAVING MUST BE REMOVED SO THAT THE SURFACE COURSE TIES IN SMOOTHLY WITH EXISTING SURFACES TO REMAIN. THE DEPTH OF THE TRIMMING GRINDING FOR THE TIE-IN SHALL VARY AT A RATE OF 1" VERTICALLY TO 50" HORIZONTAL AS DIRECTED BY THE PERMIT INSPECTOR.

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W. EXISTING PAVEMENT SHALL BE SCRIBED AND TACK COATED PRIOR TO PLACEMENT OF ANY OVERLAPPING PAVING. THE EXISTING PAVING MUST BE REMOVED SO THAT THE SURFACE COURSE TIES IN SMOOTHLY WITH EXISTING SURFACES TO REMAIN. THE DEPTH OF THE TRIMMING GRINDING FOR THE TIE-IN SHALL VARY AT A RATE OF 1" VERTICALLY TO 50" HORIZONTAL AS DIRECTED BY THE PERMIT INSPECTOR.

X. EXISTING PAVEMENT SHALL BE SCRIBED AND TACK COATED PRIOR TO PLACEMENT OF ANY OVERLAPPING PAVING. THE EXISTING PAVING MUST BE REMOVED SO THAT THE SURFACE COURSE TIES IN SMOOTHLY WITH EXISTING SURFACES TO REMAIN. THE DEPTH OF THE TRIMMING GRINDING FOR THE TIE-IN SHALL VARY AT A RATE OF 1" VERTICALLY TO 50" HORIZONTAL AS DIRECTED BY THE PERMIT INSPECTOR.

Y. EXISTING PAVEMENT SHALL BE SCRIBED AND TACK COATED PRIOR TO PLACEMENT OF ANY OVERLAPPING PAVING. THE EXISTING PAVING MUST BE REMOVED SO THAT THE SURFACE COURSE TIES IN SMOOTHLY WITH EXISTING SURFACES TO REMAIN. THE DEPTH OF THE TRIMMING GRINDING FOR THE TIE-IN SHALL VARY AT A RATE OF 1" VERTICALLY TO 50" HORIZONTAL AS DIRECTED BY THE PERMIT INSPECTOR.

Z. EXISTING PAVEMENT SHALL BE SCRIBED AND TACK COATED PRIOR TO PLACEMENT OF ANY OVERLAPPING PAVING. THE EXISTING PAVING MUST BE REMOVED SO THAT THE SURFACE COURSE TIES IN SMOOTHLY WITH EXISTING SURFACES TO REMAIN. THE DEPTH OF THE TRIMMING GRINDING FOR THE TIE-IN SHALL VARY AT A RATE OF 1" VERTICALLY TO 50" HORIZONTAL AS DIRECTED BY THE PERMIT INSPECTOR.

AA. EXISTING PAVEMENT SHALL BE SCRIBED AND TACK COATED PRIOR TO PLACEMENT OF ANY OVERLAPPING PAVING. THE EXISTING PAVING MUST BE REMOVED SO THAT THE SURFACE COURSE TIES IN SMOOTHLY WITH EXISTING SURFACES TO REMAIN. THE DEPTH OF THE TRIMMING GRINDING FOR THE TIE-IN SHALL VARY AT A RATE OF 1" VERTICALLY TO 50" HORIZONTAL AS DIRECTED BY THE PERMIT INSPECTOR.

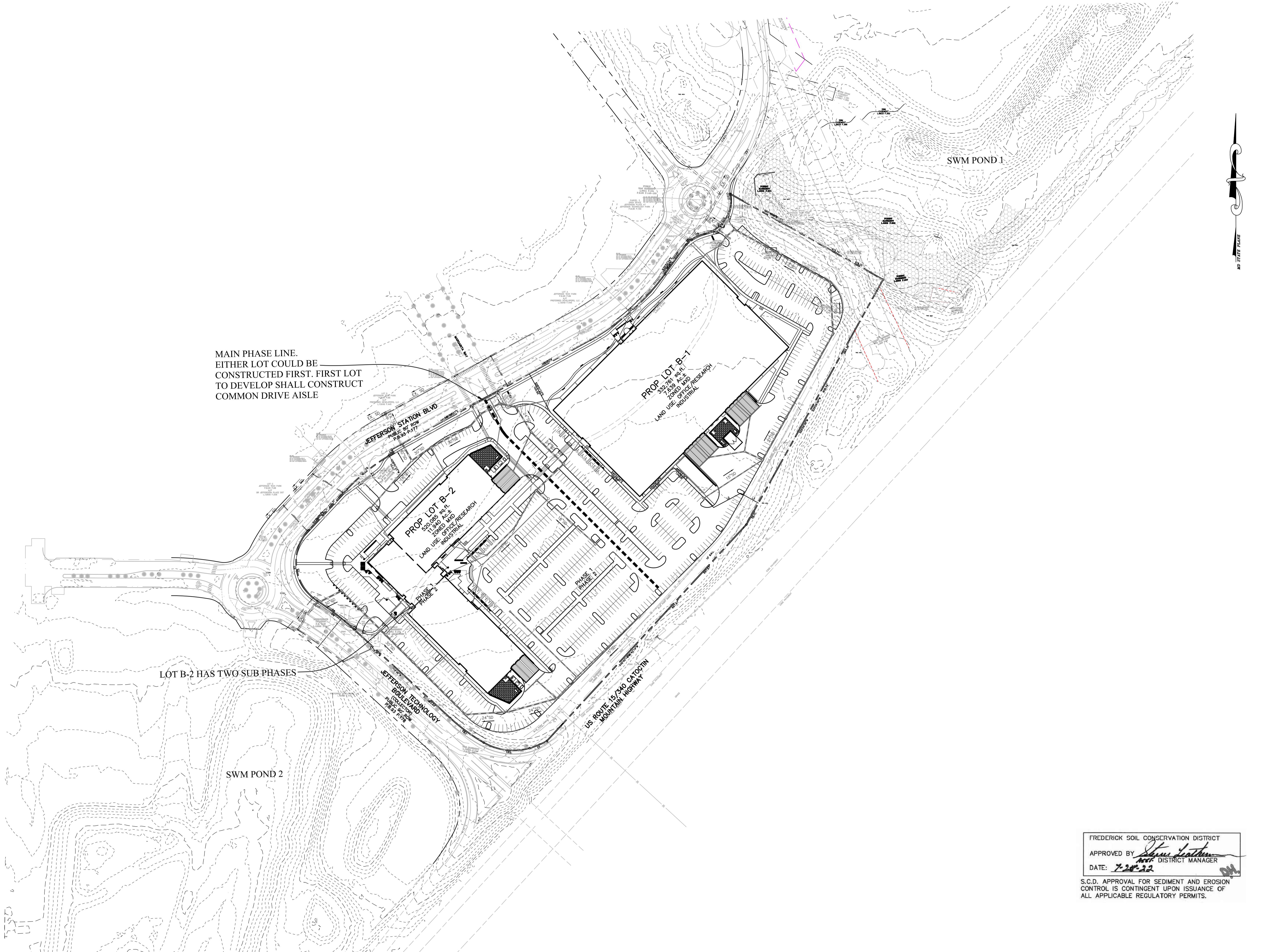
AB. EXISTING PAVEMENT SHALL BE SCRIBED AND TACK COATED PRIOR TO PLACEMENT OF ANY OVERLAPPING PAVING. THE EXISTING PAVING MUST BE REMOVED SO THAT



Division of Planning and Permitting
Department of Development
Review Engineering

APPROVED: 08/09/22

Signature:



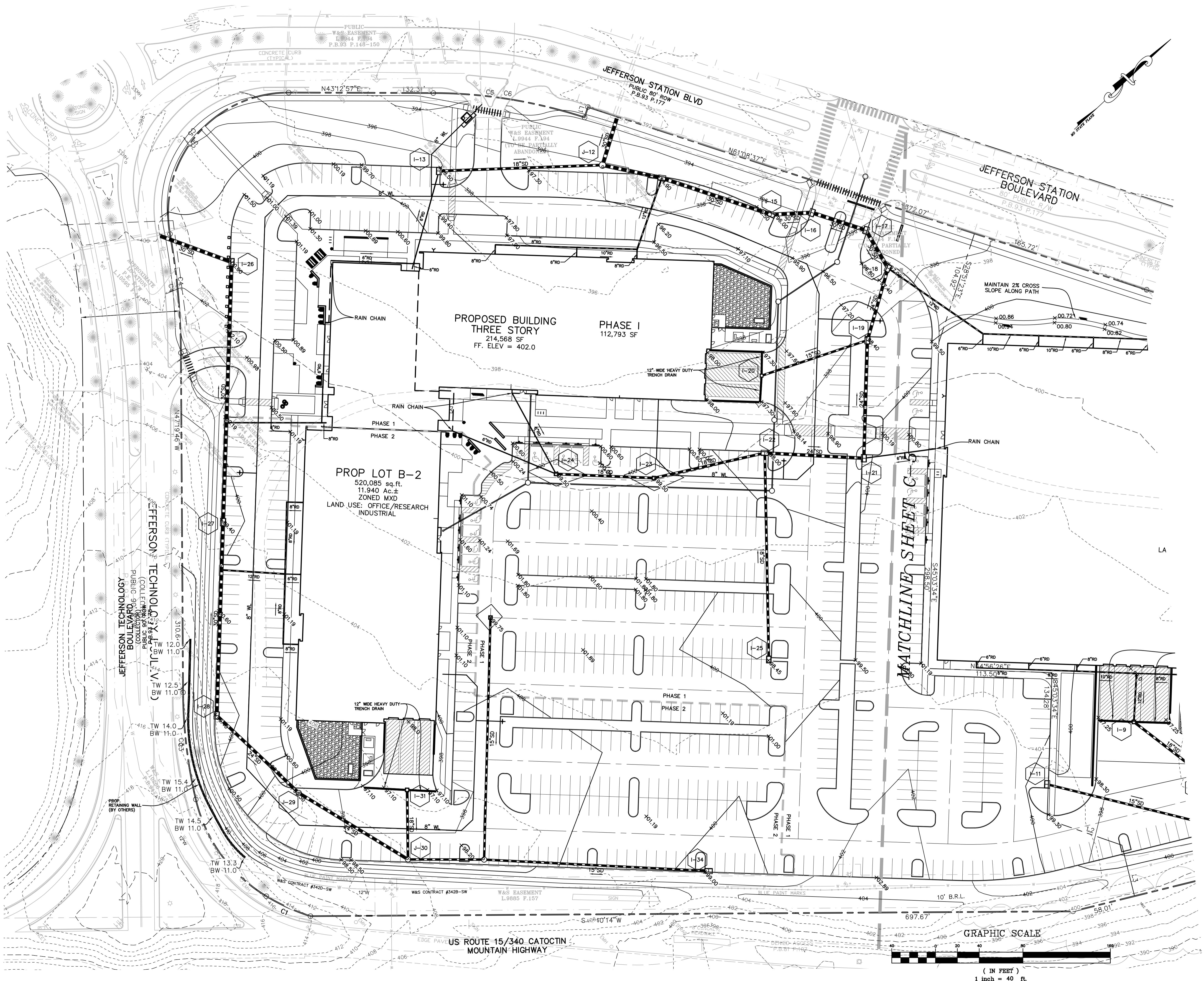
<p>125 CARROLL STREET SUITE 100 FREDERICK MARYLAND 21701 P. 301.662.4488 F. 301.662.4906 www.harrisms.com</p>	
<p>Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 28643. Expiration Date 3-26-23.</p>	
<p>HARRIS SMARIGA</p> <p>PLANNERS • ENGINEERS • SURVEYORS</p>	<p>REVISIONS: 06/13/22 - REVISED PER COUNTY COMMENTS 06/30/22 - REVISED PER COUNTY/SCD COMMENTS 06/04/22 - REVISED PER COUNTY COMMENTS</p>
<p>REVISIONS: 06/13/22 - REVISED PER COUNTY COMMENTS 06/30/22 - REVISED PER COUNTY/SCD COMMENTS 06/04/22 - REVISED PER COUNTY COMMENTS</p>	
<p>Overall Plan</p>	
<p>Jefferson Technology Park</p>	
<p>LOTS B-1 AND B-2</p>	
<p>APPROVED BY DISTRICT MANAGER</p>	
<p>DATE: 7-20-22</p>	
<p>SITUATED ON JEFFERSON STATION COURT FREDERICK COUNTY, MARYLAND</p>	
<p>Engineering Lot B-1 - P-2 Overall Plan B-1 AND B-2 Dwg 8/1/2022 3:05 PM</p>	
<p>Engineering Lot B-1 - P-2 Overall Plan B-1 AND B-2 Dwg 8/1/2022 3:05 PM</p>	
<p>C-3</p>	



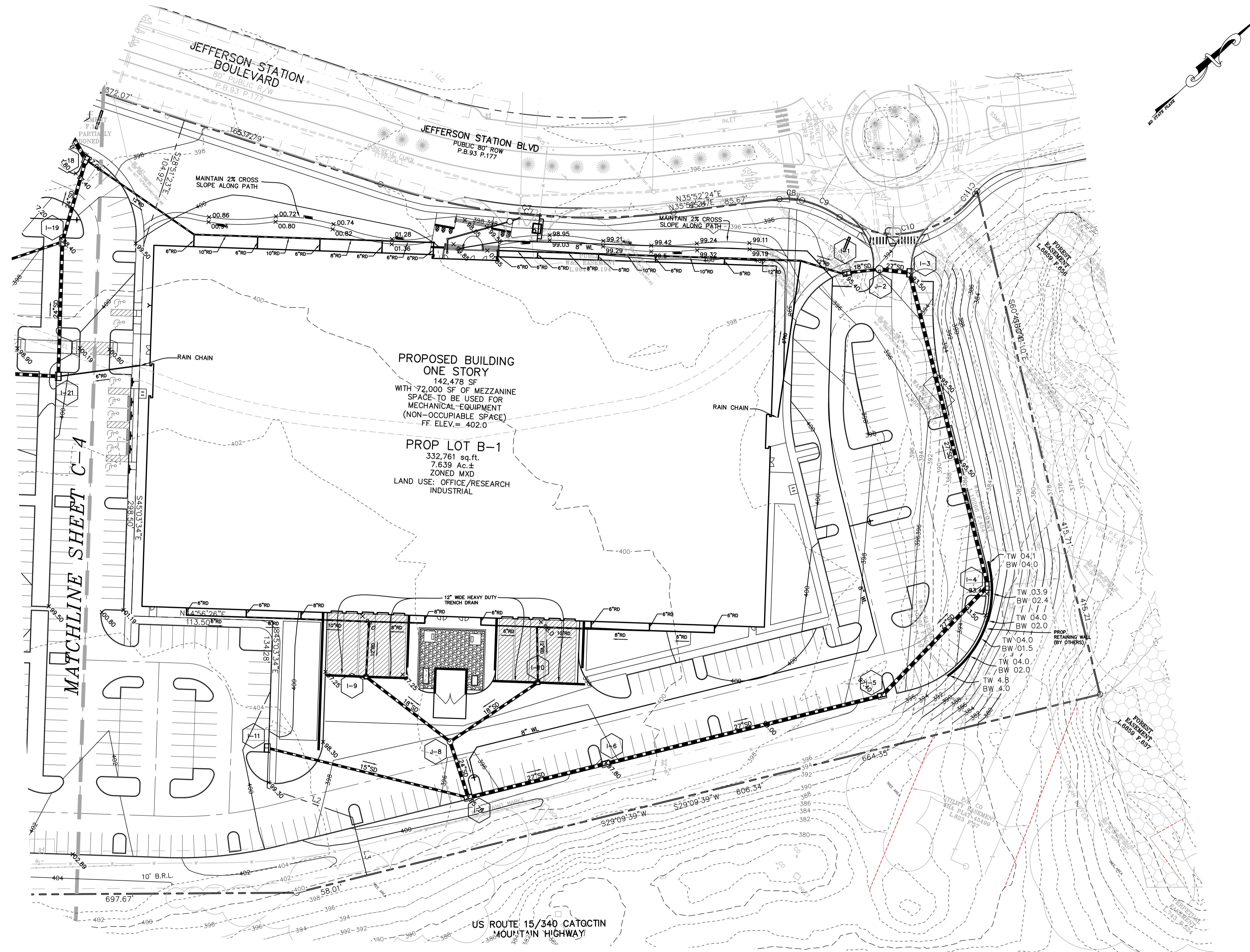
**Division of Planning and Permitting
Department of Development
Review Engineering**

APPROVED: 08/09/22

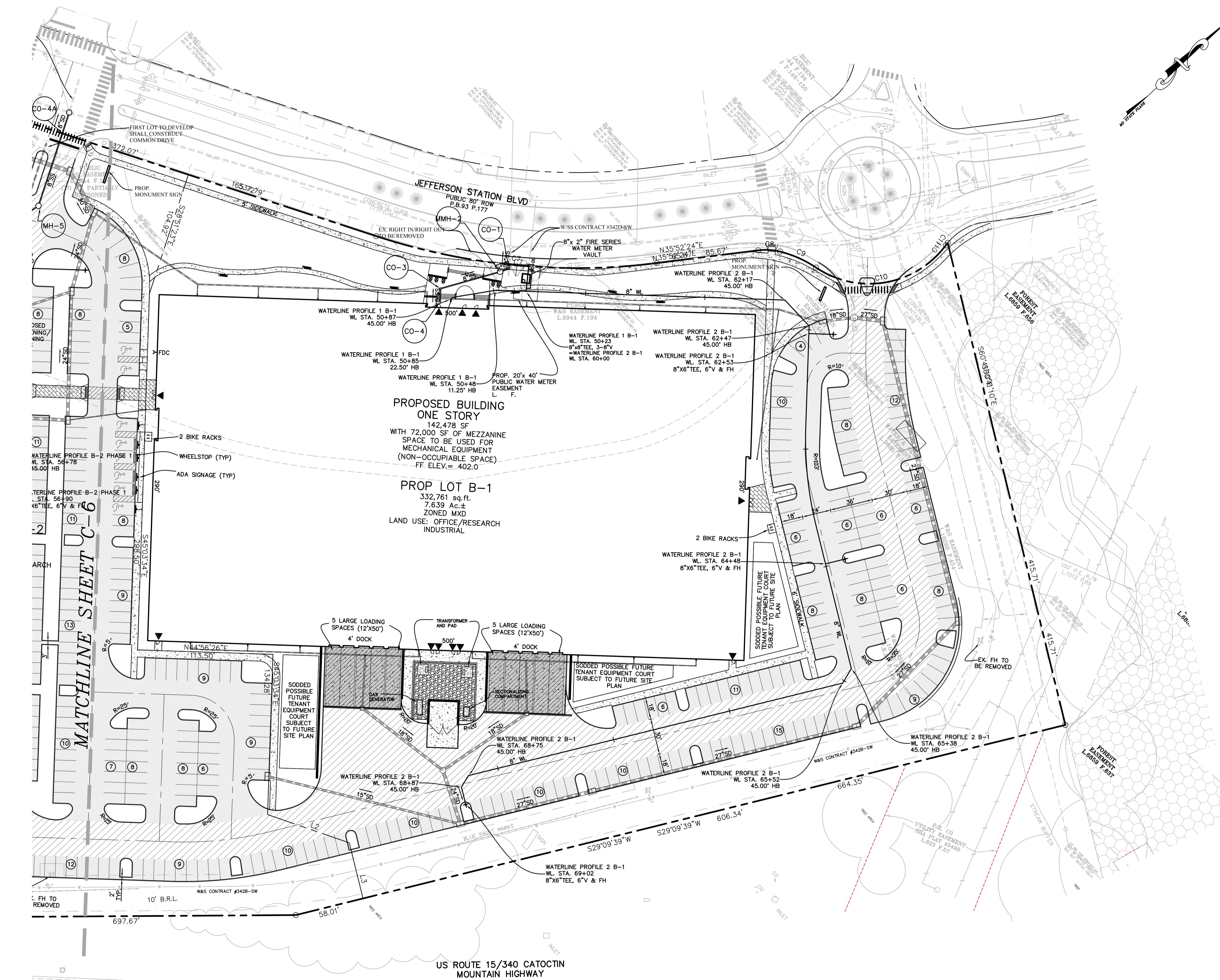
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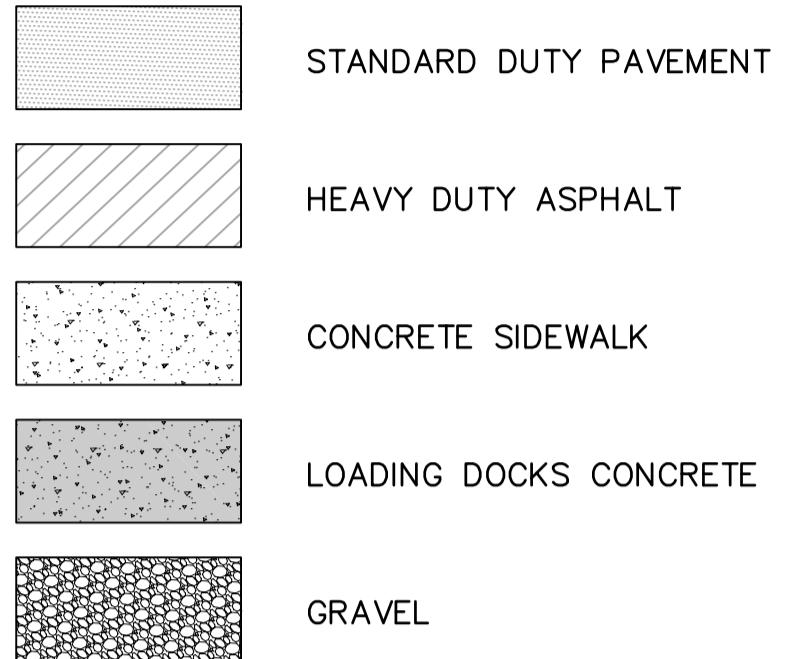
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DRAWN BY: RLP	JEFFERSON TECHNOLOGY PARK					
CHECKED BY: MAM	LOTS B-1 AND B-2					
DATE: MAY 2022	SITUATED ON JEFFERSON STATION COURT					
SHEET: C-4 OF: 21	ELECTION DISTRICT NO. 23					
PROJECT: 7526	FREDERICK COUNTY, MARYLAND					
C-4						
 <p>HARRIS SMARIGA PLANNERS • ENGINEERS • SURVEYORS</p> <p>125 S. CARROLL STREET SUITE 100 FREDERICK MARYLAND 21701 P: 301.662.4488 F: 301.662.4906 www.harrissmariga.com</p>						
<p>REVISIONS:</p> <table border="0"> <tr> <td>06.13.22 - REVISED PER COUNTY COMMENTS</td> </tr> <tr> <td>06.30.22 - REVISED PER COUNTY/SCD COMMENTS</td> </tr> <tr> <td>08.04.22 - REVISED PER COUNTY COMMENTS</td> </tr> </table>				06.13.22 - REVISED PER COUNTY COMMENTS	06.30.22 - REVISED PER COUNTY/SCD COMMENTS	08.04.22 - REVISED PER COUNTY COMMENTS
06.13.22 - REVISED PER COUNTY COMMENTS						
06.30.22 - REVISED PER COUNTY/SCD COMMENTS						
08.04.22 - REVISED PER COUNTY COMMENTS						
<p>PROFESSIONAL CERTIFICATION</p> <p>No. 28643 HARRIS SMARIGA, PLLC PARKER, A. MURRAY S. PARK, A. MURRAY PROFESSIONAL ENGINEER 0</p> <p>I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.</p>						
<p>License No. 28643 Expiration Date <u>3-26-23</u></p>						



<p>PROFESSIONAL ENGINEERS No. 2843</p> <p>LEWIS A. MURRAY, PE S. J. SMARIGA, PE</p> <p>125 CARROLL STREET SUITE 100 FREDERICK MARYLAND 21701 P. 301.662.4488 F. 301.662.4906 www.harrissmariga.com</p>	
<p>Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 2843. Expiration Date 3-26-23.</p>	
<p>HARRIS SMARIGA PLANNERS ENGINEERS • SURVEYORS</p> <p>REVISIONS: 06.13.22 - REVISED PER COUNTY COMMENTS 06.30.22 - REVISED PER COUNTY/CD COMMENTS 06.04.22 - REVISED PER COUNTY COMMENTS</p> <p>REVISIONS: 06.13.22 - REVISED PER COUNTY COMMENTS 06.30.22 - REVISED PER COUNTY/CD COMMENTS 06.04.22 - REVISED PER COUNTY COMMENTS</p> <p>STATED ON JEFFERSON STATION COURT LOTS B-1 AND B-2 FREDERICK COUNTY, MARYLAND</p> <p>1:PROJ/7526/1/000 ENGINEERING/LOT B-1 - 1-2 GRADING AND STORM DRAIN PLANS 1-1 AND B-2/000 7/17/2022 11:12:42 AM</p>	<p>GRADING AND STORM DRAIN PLAN - 2</p> <p>JEFFERSON TECHNOLOGY PARK LOTS B-1 AND B-2</p> <p>DATE: MAY 2022 OF: 21 PROJECT: 7526 C-5</p>



PAVEMENT LEGEND



Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 28643. Expiration Date 3-26-23.

HARRIS SMARIGA
PLANNERS ENGINEERS • SURVEYORS
125 CARROLL STREET
SUITE 100
FREDERICK, MARYLAND 21701
P: 301.662.4488
F: 301.662.4906
www.harrismary.com

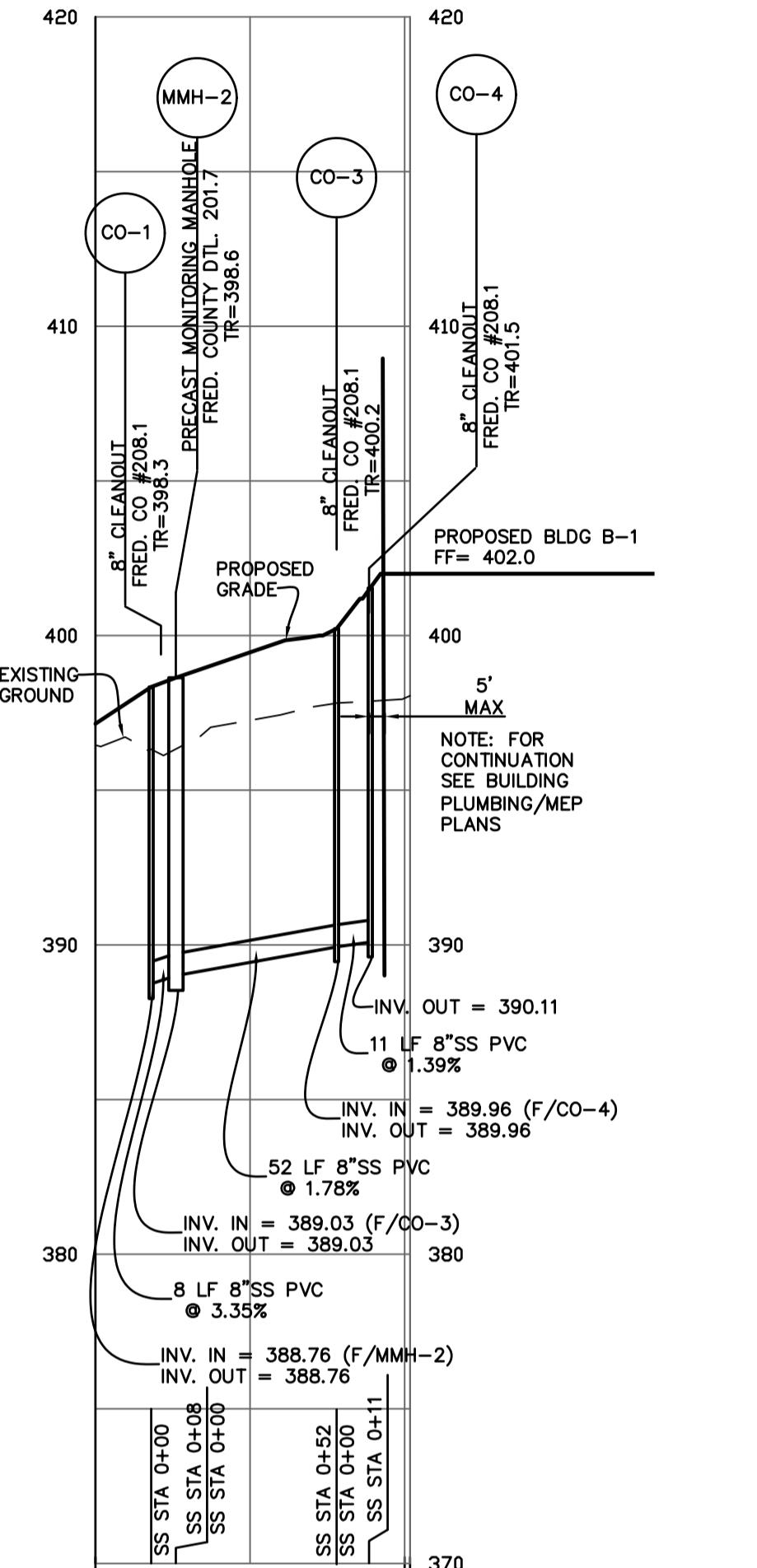
REVISIONS:	06/13/22 - REVISED PER COUNTY COMMENTS
REVISIONS:	06/13/22 - REVISED PER COUNTY COMMENTS
REVISIONS:	06/04/22 - REVISED PER COUNTY COMMENTS

APPROVED ON JEFFERSON STATION COURT
LOTS B-1 AND B-2
FREDERICK COUNTY, MARYLAND
8/5/2022 10:57 AM

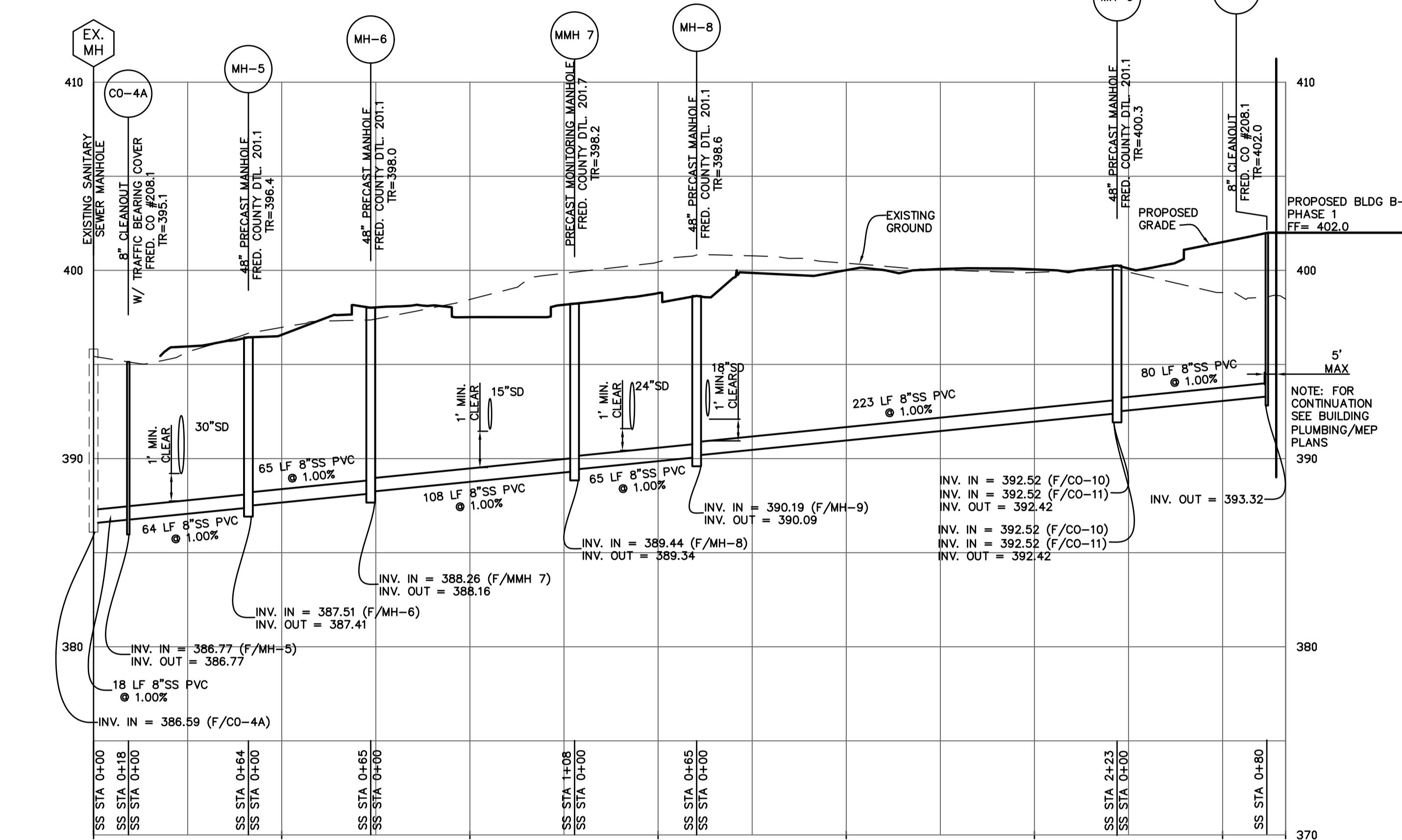
PROJECT: 7526
SHEET: C-7
OF: C-7
DATE: MAY 2022
W & SS CONTRACT #342D1-SW (LOT B-1)
W & SS CONTRACT #342D2-SW (LOT B-2)



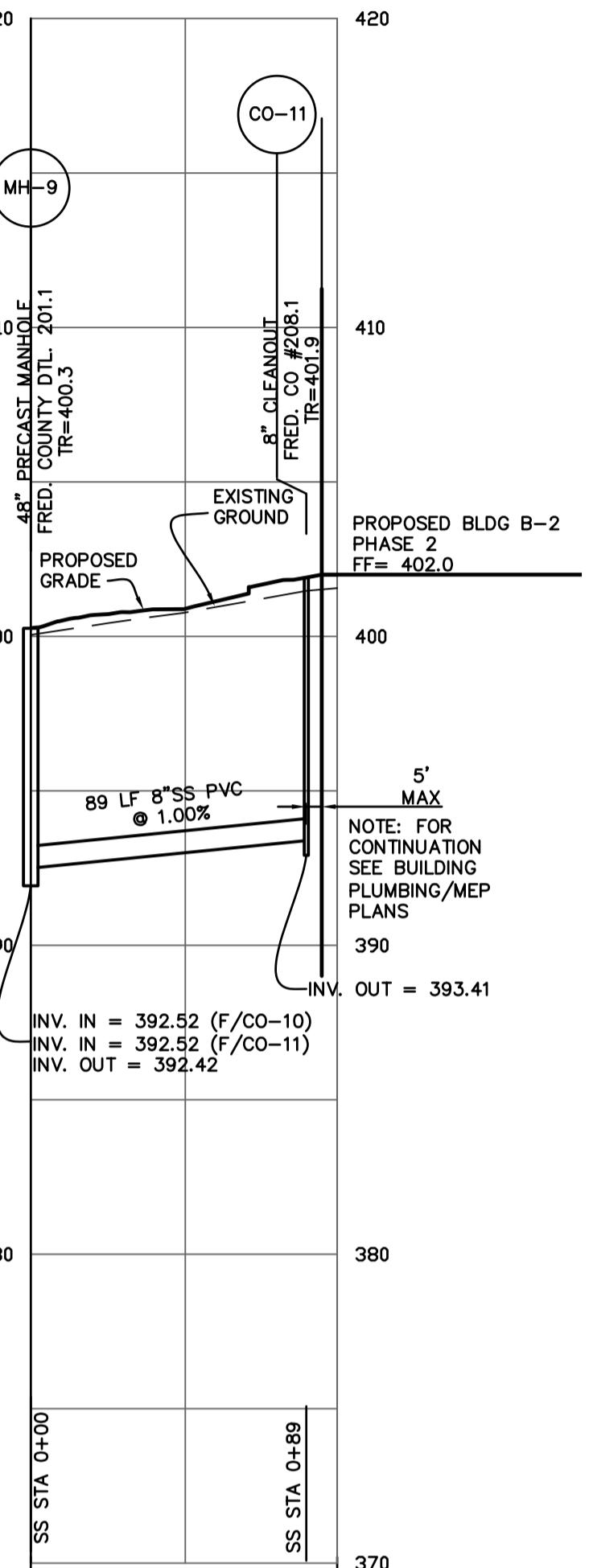
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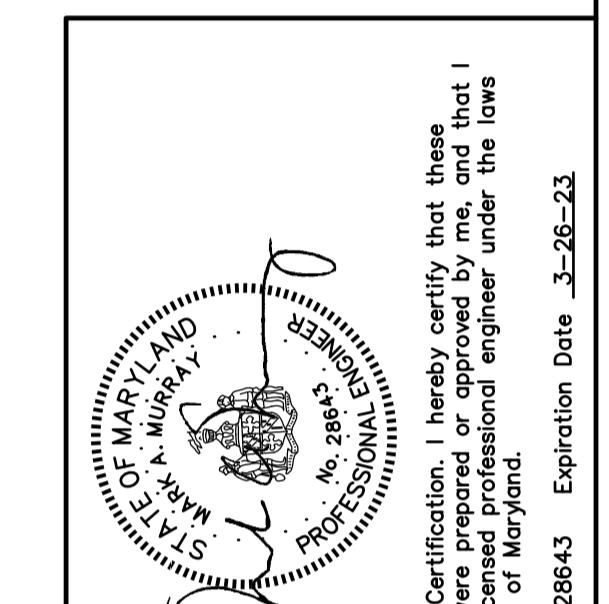
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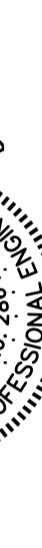


SEWER PROFILE B-2 PHAS
Profile Scale:
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Vertical = 1"=5'



SEWER PROFILE B-2 PHASE 2
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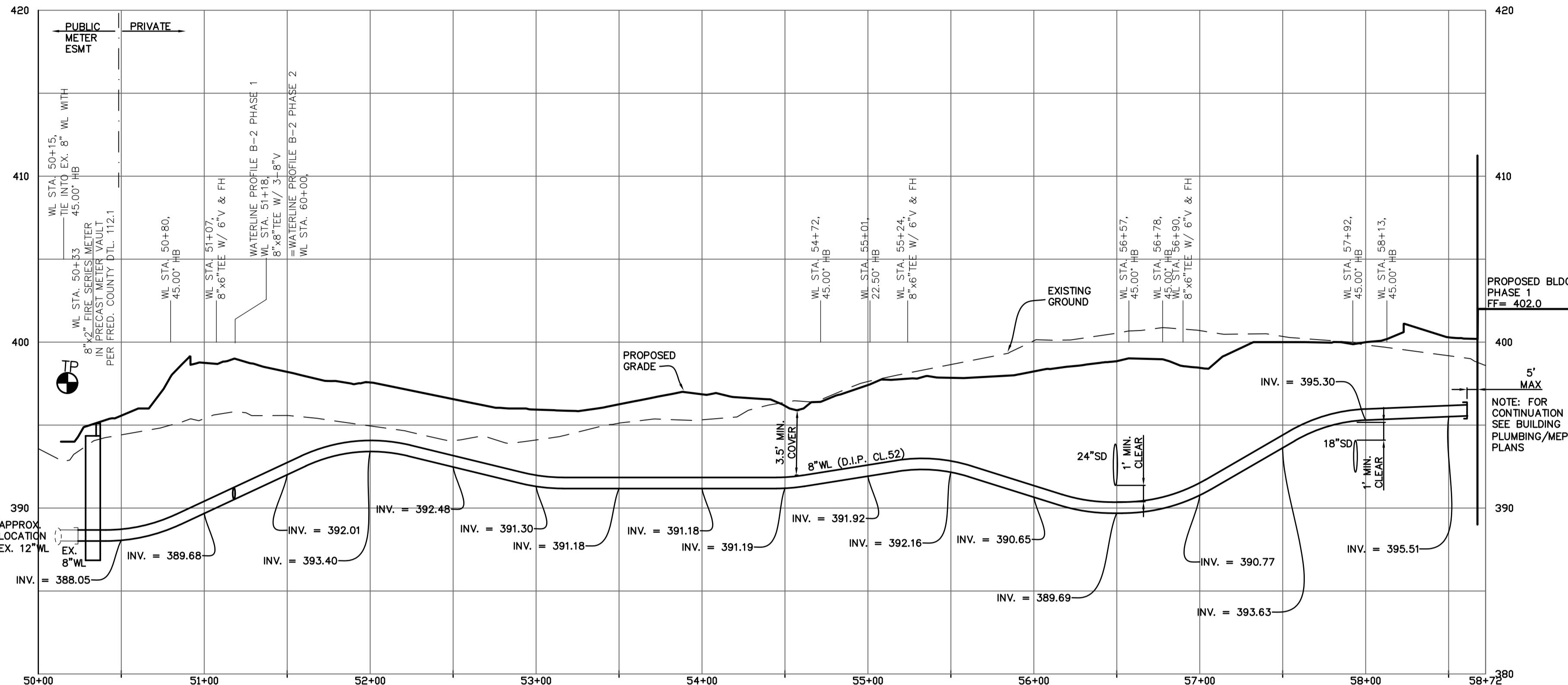
A circular professional engineer seal. The outer ring contains the text "PROFESSIONAL ENGINEER" at the top and "No. 28643" at the bottom. The inner circle contains the text "I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland."

& SS CONTRACT #342D1-SW (LOT B-1)
& SS CONTRACT #342D2-SW (LOT B-2)

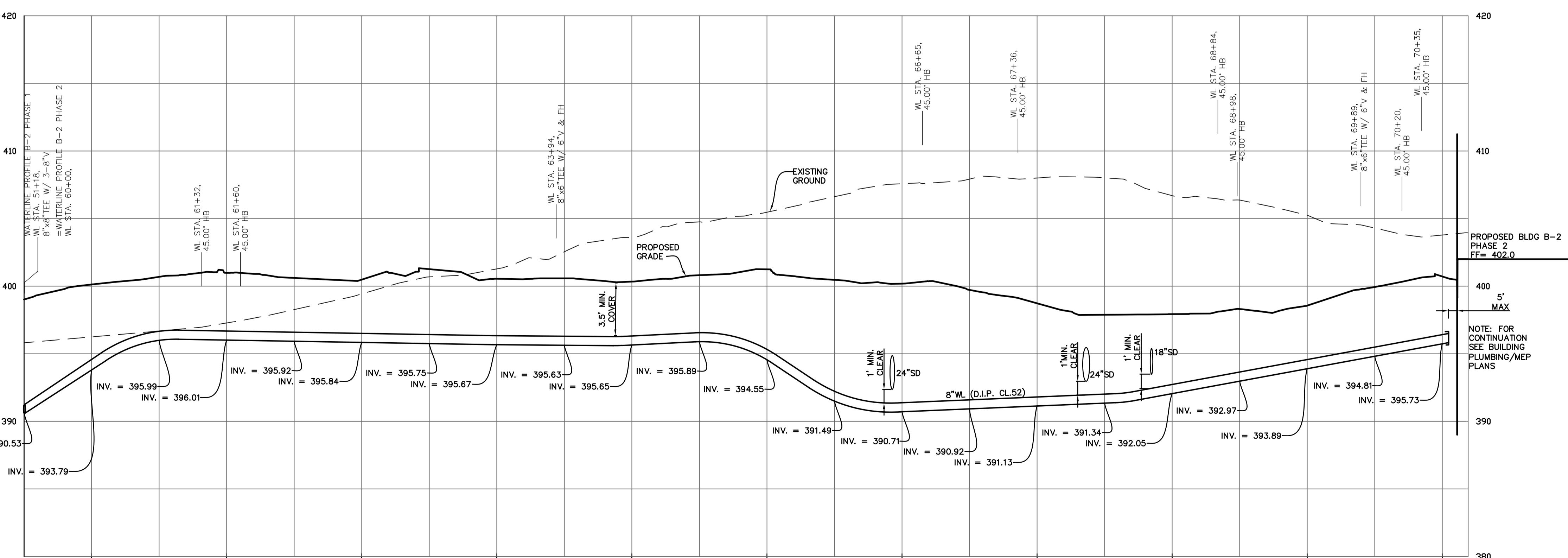
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CHECKED BY: MAM	
DATE: MAY 2022	JEFFERSON TECHNOLOGY PARK LOTS B-1 AND B-2
SHEET: C-8 OF: 21	SITUATED ON JEFFERSON STATION COURT ELECTION DISTRICT NO. 23 FREDERICK COUNTY, MARYLAND
PROJECT: 7526	C-8



Signature:



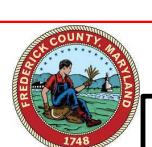
WATERLINE PROFILE B-2 PHA
Profile Scale:
Horizontal = 1"=50'
Vertical = 1" = 5'



WATERLINE PROFILE B-2 PH
Profile Scale:
Horizontal = 1"=50'
Vertical = 1"=5'

& SS CONTRACT #342D1-SW (LOT B-1)
& SS CONTRACT #342D2-SW (LOT B-2)

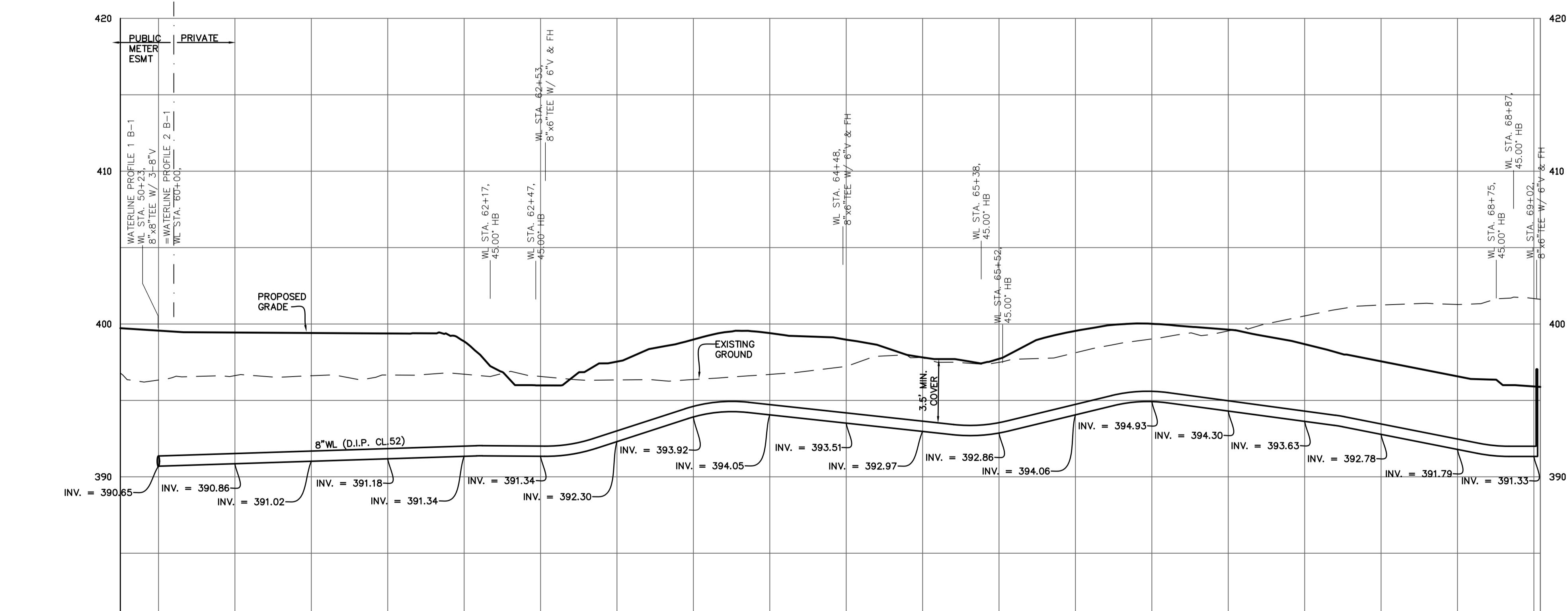
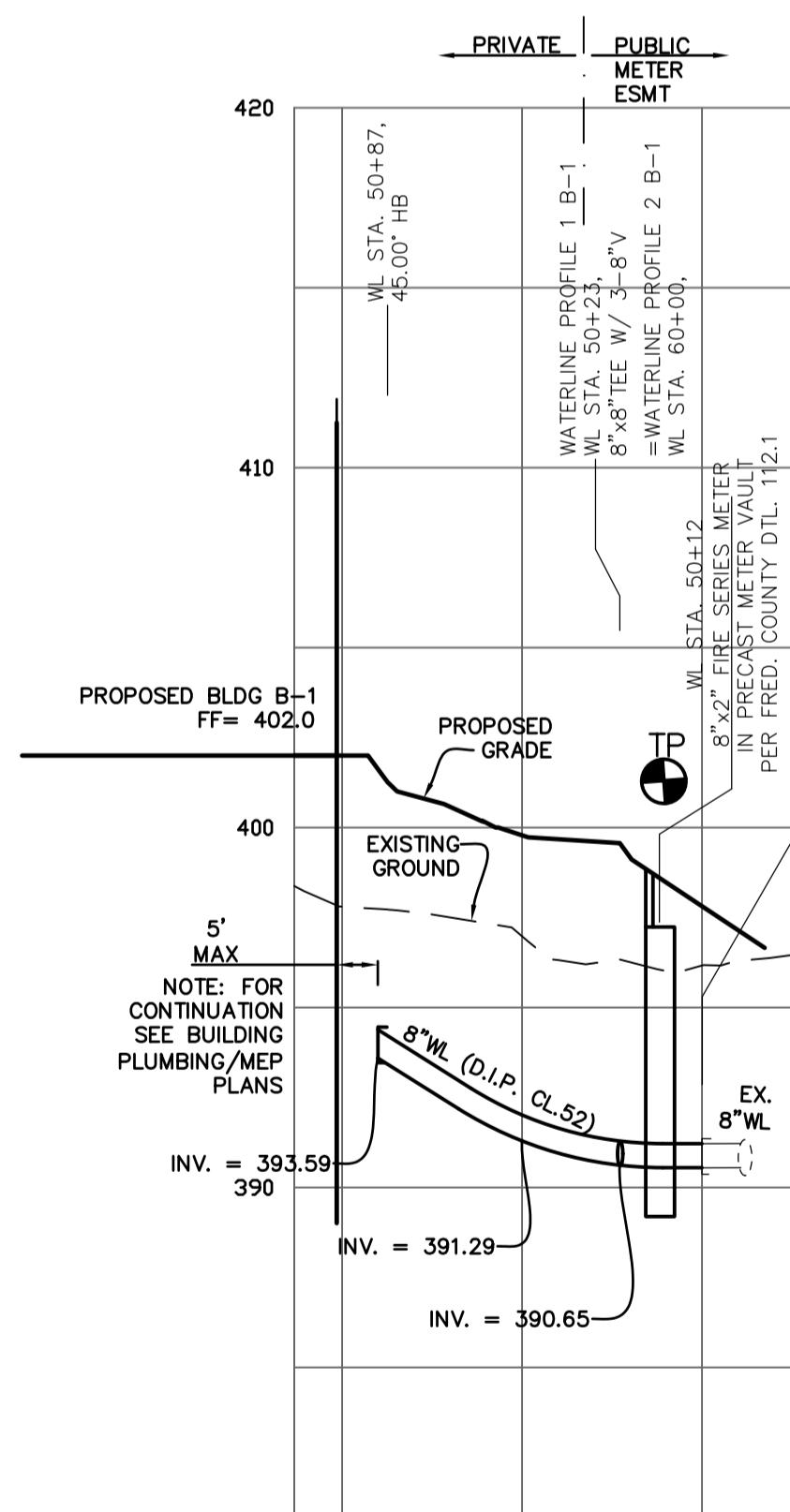
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DRAWN BY: RLP	DATE: MAY 2022
CHECKED BY: MAM	SHEET: C-9 OF: 21
PROJECT: 7526	PROFESSIONAL ENGINEER HARRIS MARGA 125 S. CARROLL STREET SUITE 100 FREDERICK MARYLAND 21701 P: 301.662.4488 F: 301.662.4906 www.harris-marga.com PLANNERS • ENGINEERS • SURVEYORS
REVISIONS: 06.13.22 – REVISED PER COUNTY COMMENTS 06.30.22 – REVISED PER COUNTY/SCD COMMENTS 08.04.22 – REVISED PER COUNTY COMMENTS	
JEFFERSON TECHNOLOGY PARK LOTS B-1 AND B-2 SITUATED ON JEFFERSON STATION COURT ELECTION DISTRICT NO. 23 FREDERICK COUNTY, MARYLAND	

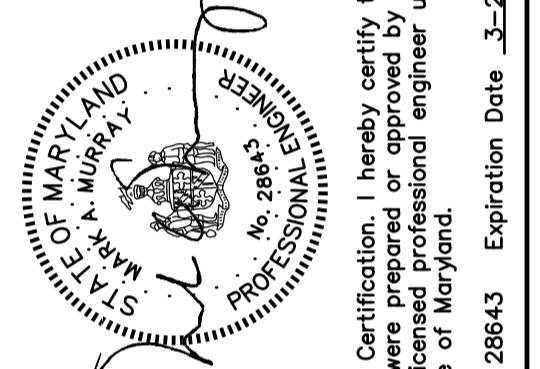


Division of Planning and Permitting
Department of Development
Review Engineering

APPROVED: 08/09/22

Signature:



 <p>PROFESSIONAL ENGINEERS No. 2843</p>	
<p>Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 28643. Expiration Date 3-26-23.</p>	
<p>HARRIS SMARIGA PLANNERS ENGINEERS • SURVEYORS 125 CARRICK STREET SUITE 100 FREDERICK MARYLAND 21701 P: 301.662.4488 F: 301.662.4906 www.harrissmariga.com</p>	<p>REVISIONS: 06/13/22 - REVISED PER COUNTY COMMENTS 06/30/22 - REVISED PER COUNTY COMMENTS 06/04/22 - REVISED PER COUNTY COMMENTS</p>
<p>JEFFERSON TECHNOLOGY PARK LOTS B-1 AND B-2</p>	
<p>SITUATED ON JEFFERSON STATION COURT FREDERICK COUNTY, MARYLAND</p>	
<p>W & SS CONTRACT #342D1-SW (LOT B-1) W & SS CONTRACT #342D2-SW (LOT B-2)</p>	
<p>SCALE: AS SHOWN DRAWN BY: RLP CHECKED BY: MAN DATE: MAY 2022 SHEET: C-10 OF: 21 PROJECT: C-10</p>	
<p>1:PROJ756 ENGINEERING/LOT B-1 - P-2 WATER AND SEWER PROFILE.DWG 8/5/2022 10:56 AM</p>	



WATER & SEWER GENERAL NOTES

- All water and sewer construction shall be in accordance with the Frederick County General Conditions and Standard Specifications for Water Mains, Sanitary Sewer and Related Structures and the Standard Details for Water Mains, Sanitary Sewer and Related Structures.
- The contractor shall not tap or penetrate existing water and/or sewer mains without approval from Frederick County DUSWM.
- The contractor shall not operate valves on existing County-owned water mains.
- The contractor is responsible to avoid the spillage of raw sewage. The contractor shall furnish the necessary equipment (sewer plugging, pumping, containment, etc.) to prevent said spillage.
- Excavation within a State road right-of-way shall be performed in accordance with the provisions in the permit issued by the Maryland State Highway Administration (MSHA).
- Excavation within a County road right-of-way for the purpose of the installation of utilities, storm drains, etc. shall be performed in accordance with the provisions in the permit issued by the Frederick County Division of Public Works.
- Existing utilities are shown from best available records. The contractor shall test pit in the areas of known utilities to verify size, elevation, location and type prior to performing any work. Any utility, whether shown or not, that is damaged by the contractor shall be repaired immediately at no expense to the owner. SHOULD THE CONTRACTOR DISCOVER DISCREPANCIES BETWEEN THE PLANS AND FIELD CONDITIONS, THE UTILITY OWNER IS TO BE NOTIFIED IMMEDIATELY. SHOULD THE CONTRACTOR MAKE FIELD CORRECTIONS OR ADJUSTMENTS WITHOUT THE AUTHORIZATION OF THE OWNER, THEN THE CONTRACTOR ASSUMES THE RESPONSIBILITY FOR SAID CORRECTIONS OR ADJUSTMENTS.
- Any necessary adjustments to existing manholes, valve boxes, etc., are to be done by the contractor. The contractor is responsible for removing and replacing any existing fences, driveways, signs, drainage pipes, mailboxes, shrubs, trees, etc. damaged or removed during construction. All disturbed areas shall be returned to their original condition or better.
- The contractor shall notify Miss Utility (1-800-257-7777) 5 days prior to start of construction.
- The contractor shall be responsible for keeping silt and debris out of the sewer and storm drainage systems for the duration of the contract.
- The contractor shall maintain access to all property owners at all times. The contractor will coordinate with property owners and acquire their approval if access must be interrupted for short time periods.

Disinfection and testing will be performed in accordance with AWWA C651-05 or latest edition. The contractor shall be required to have bacterial testing performed on all new sewer lines and shall be required to have MDP testing performed on all new water lines prior to County granting conditional acceptance of the contract. Requirements include, but are not limited to obtaining two consecutive sets of acceptable samples that are collected a minimum 24 hours apart. One sample shall be collected for residual chlorine, total coliform, total and E. Coli analysis for every 1200 feet of pipeline [?]; at the end of each branch; and at the end of the line. After disinfection the line must be flushed. Chlorine residual samples must yield a result of 1.0 PPM or less before total coliform or E. Coli analysis may be performed. All sample collections shall be performed by individuals certified for drinking water sampling. Maryland Department of Environment (MDE) shall be responsible for all analyses. Analyses shall be certified by the Maryland Department of Environment for total coliform and E. Coli analysis. If a contractor has allowed contaminants to enter the pipe during construction (this shall be determined by the inspector) then sampling may be required at reduced distance intervals as determined by the DUSWM. Disinfected water (of chlorine residual 1.0 PPM or less) will stand in the line for at least 16 hours after a final flush. Certified bacterial tests shall be provided to the DUSWM and shall include certification information for both the sample collector & the laboratory.

13. Requirements for Televising Sanitary Sewer Lines

All public(ish) gravity sewer lines and laterals shall be televised as a condition of inspection in order to obtain conditional/operational acceptance. Televising shall be done in accordance with Section 2571, ILA.2 of Standard Specifications. Televising films must be submitted and approved by the DUSWM prior to their use. The DVD must be viewed and approved by the DUSWM prior to acceptance of the sewer mains and laterals and placing any portion of the system into service.

The following procedures must be followed:

- All mains and laterals for the project must be installed, backfilled and compaction tests reviewed and approved by the DUSWM prior to televising.
- Complete all pressure tests, deflection tests and M/I vacuum tests prior to televising.
- All mains and laterals shall be flushed with water, dyed red, in a manner sufficient to remove all dirt and debris and provide enough water to discern any standing water. Flushing will take place no earlier than 48 hr prior to televising and will be witnessed by the DUSWM inspector. Contractor shall ensure that no construction debris is flushed.
- Stand pipes to mains will be labeled with lot #, etc. with a bold, black, permanent marker by the contractor and verified by the inspector as correct. Pan the lot # with the camera prior to inserting camera into the cleanout stack.
- Project name, number, date, time, type and size of pipe and M/I # + M/I # or lot # will be displayed on the screen at all times and must not obscure the view of the sewer pipe. There must be a running count of the linear footage shown on the screen.
- After televising and prior to Conditional Acceptance, if the DUSWM determines that any infiltration, percolation damage may have occurred to any main or lateral, these must be repaired and re-inspected.
- Video of all lines and laterals must be placed on one DVD if space permits (if not, place mains on one DVD and laterals on another) in a format that can be viewed on Windows Media Player or Real Player. A written report must be provided from the televising company containing a log noting the information in item 5 above, the general condition of the line/lateral and any specific features. The main lines and laterals log must be kept in the same sequence as shown on the DVD.
- Tolerances:
 - No dirt, stone or other debris permitted in mains or laterals.
 - No standing water in laterals.
- The decision to allow any standing water in mains will be determined by the DUSWM based on pipe diameter, % slope and/or other factors as determined by the DUSWM.

14. ALL WATER MAINS TO BE DUCTILE IRON PIPE (3" - 6" CLASS 54, 8" AND LARGER CLASS 52). ALL GRAVITY SEWER MAINS AND/OR 35 PVC, UNLESS DEPTH EXCEEDS 14', THEN USE SDR-26, UNLESS OTHERWISE NOTED.

15. SANITARY SEWER HOUSE CONNECTION SHALL SLOPE 2% MIN. AND 5% MAX.

16. MEGALUG RESTRAINTS TO BE USED ON WATER LINES WHERE EARTH IS DISTURBED BY OTHER CONSTRUCTION.

17. ALL PUBLIC FITTINGS AND VALVES ARE TO BE RESTRAINED BY USE OF "MEGA-LUGS" OR EQUAL. IF NO RESTRAINED JOINT LENGTH IS SHOWN ON THE DRAWINGS, INSTALL CONCRETE BUTTRESS/ANCHORS AT FITTINGS PER THE STANDARDS DETAILS OR SUBMIT AN RFI TO THE ENGINEER TO HAVE RESTRAINED JOINT LENGTH CLARIFIED.

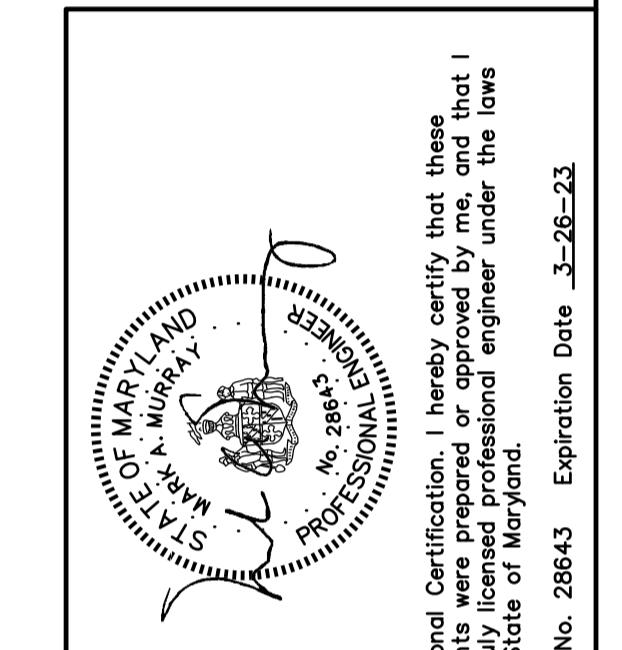
18. ALL OUTSIDE FIRE PROTECTION LINE CONSTRUCTION SHALL CONFORM TO NFPA 24 REQUIREMENTS.

19. ALL SANITARY SEWER CLEANOUTS (C/O) TO BE CONSTRUCTED PER FRED. CO. STD. DTL. 206.4, OR 208.1 IF IN TRAFFIC AREAS.

20. OWNER/DEVELOPER/CONTRACTOR RESPONSIBILITIES FOR SUBGRADE: A. THE CONTRACTOR SHALL ENSURE THAT THE GROUND ELEVATION OVER THE WATER AND/OR SEWER LINE LOCATIONS IS WITHIN SIX (6) INCHES OF FINISHED GRADE (OUTSIDE ROADWAY) OR AT THE ROAD SUBGRADE ELEVATION (WITHIN ROADWAY) PRIOR TO THE START OF ANY EXCAVATION OR TRENCHING OF WATER AND/OR SEWER LINES. CUT SHEETS PREPARED BY THE CONTRACTOR SHALL BE PRESENTED TO THE INSPECTOR DILIGENTLY IN ADVANCE OF THE WORK COMMENCE. THE ADVANCE NOTICE TO BE PROVIDED TO THE INSPECTOR DURING THE PRECONSTRUCTION MEETING. THE INSPECTOR RESERVES THE RIGHT TO WITHHOLD PAYMENT AND/OR TO STOP WORK IF CUT SHEETS ARE NOT PROVIDED IN A TIMELY FASHION. B. IF AFTER INSTALLATION OF WATER AND/OR SEWER FACILITIES THERE EXISTS A CONFLICT WITH OTHER UTILITIES (SHOWN AS FUTURE), THE RELOCATION, ADJUSTMENT, REPLACEMENT, ETC. OF SAID WATER AND SEWER WILL BE AFFECTED PURSUANT TO ARTICLE 10 OF THE GENERAL CONDITIONS AND STANDARD SPECIFICATIONS. C. IF SUBGRADE IS SHOWN AS CONTROLLED FILL OR FILL BENEATH THE WATER AND/OR SANITARY SEWER, THE MASS GRADING ENGINEER OF RECORD SHALL CERTIFY THE ENTIRE PORTION OF THE MASS GRADED AREA HAS BEEN INSTALLED PURSUANT TO THE SECTION 2200 WHERE WATER AND/OR SEWER LINES ARE TO BE INSTALLED.

21. 18" MINIMUM SEPARATION BETWEEN ALL VALVES AND TEE/CROSS.

W & SS CONTRACT #342D1-SW (LOT B-1)
W & SS CONTRACT #342D2-SW (LOT B-2)



HARRIS SMARIGA <small>PLANNERS ENGINEERS • SURVEYORS</small>	
125 CARROLL STREET SUITE 100 FREDERICK, MARYLAND 21701 P: 301.662.4498 F: 301.662.4906 www.harrisengineering.com	REVISIONS: 06-13-22 - REVISED PER COUNTY COMMENTS 06-04-22 - REVISED PER COUNTY COMMENTS

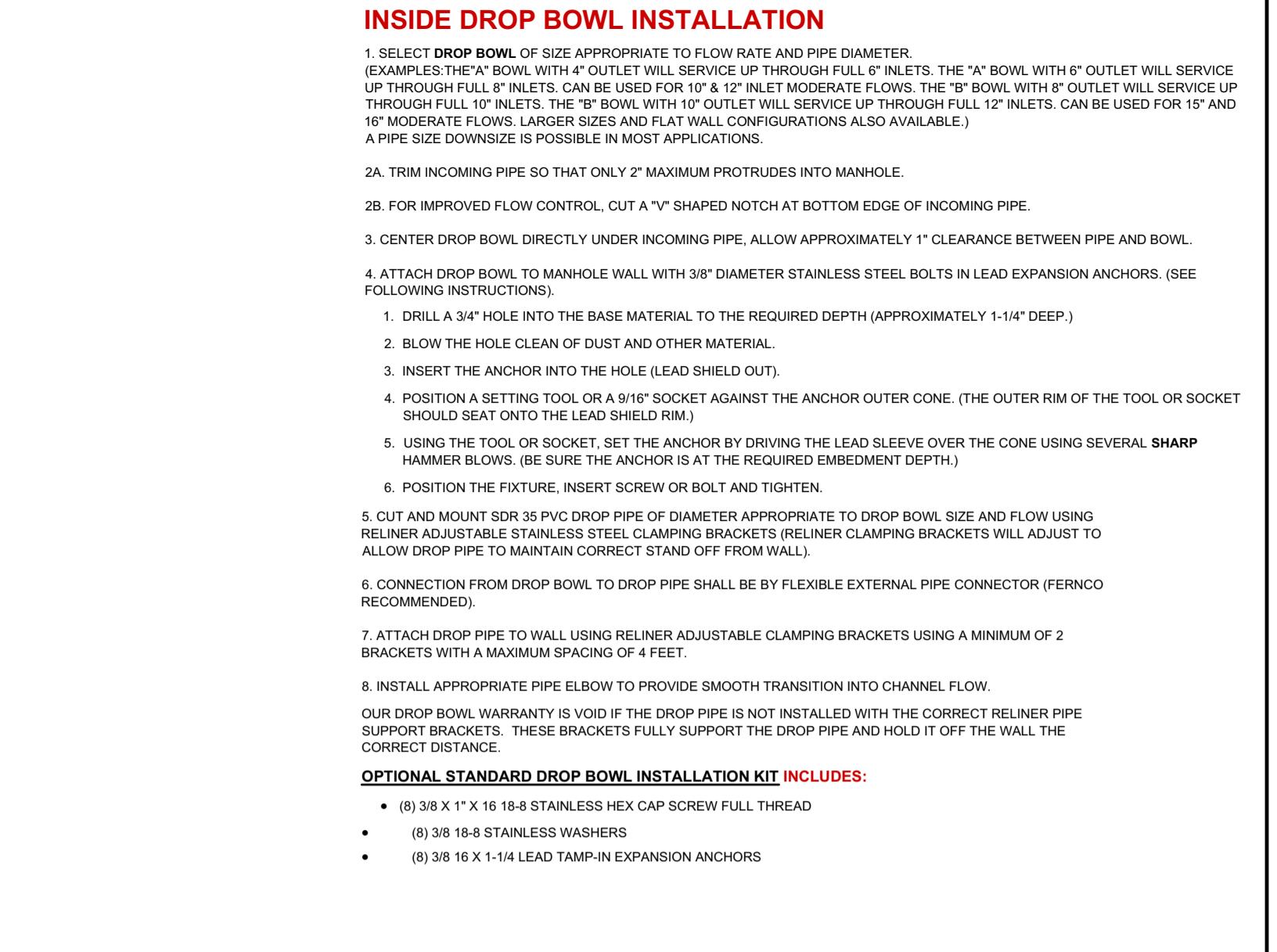
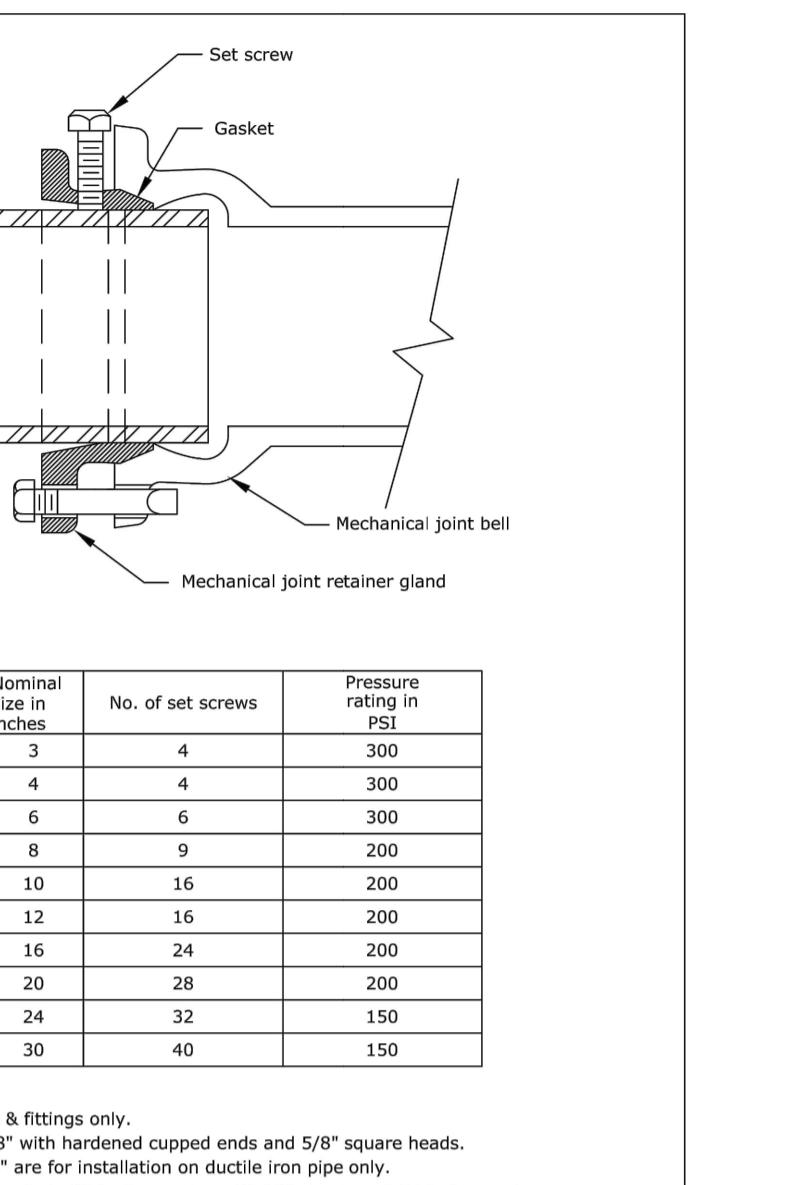
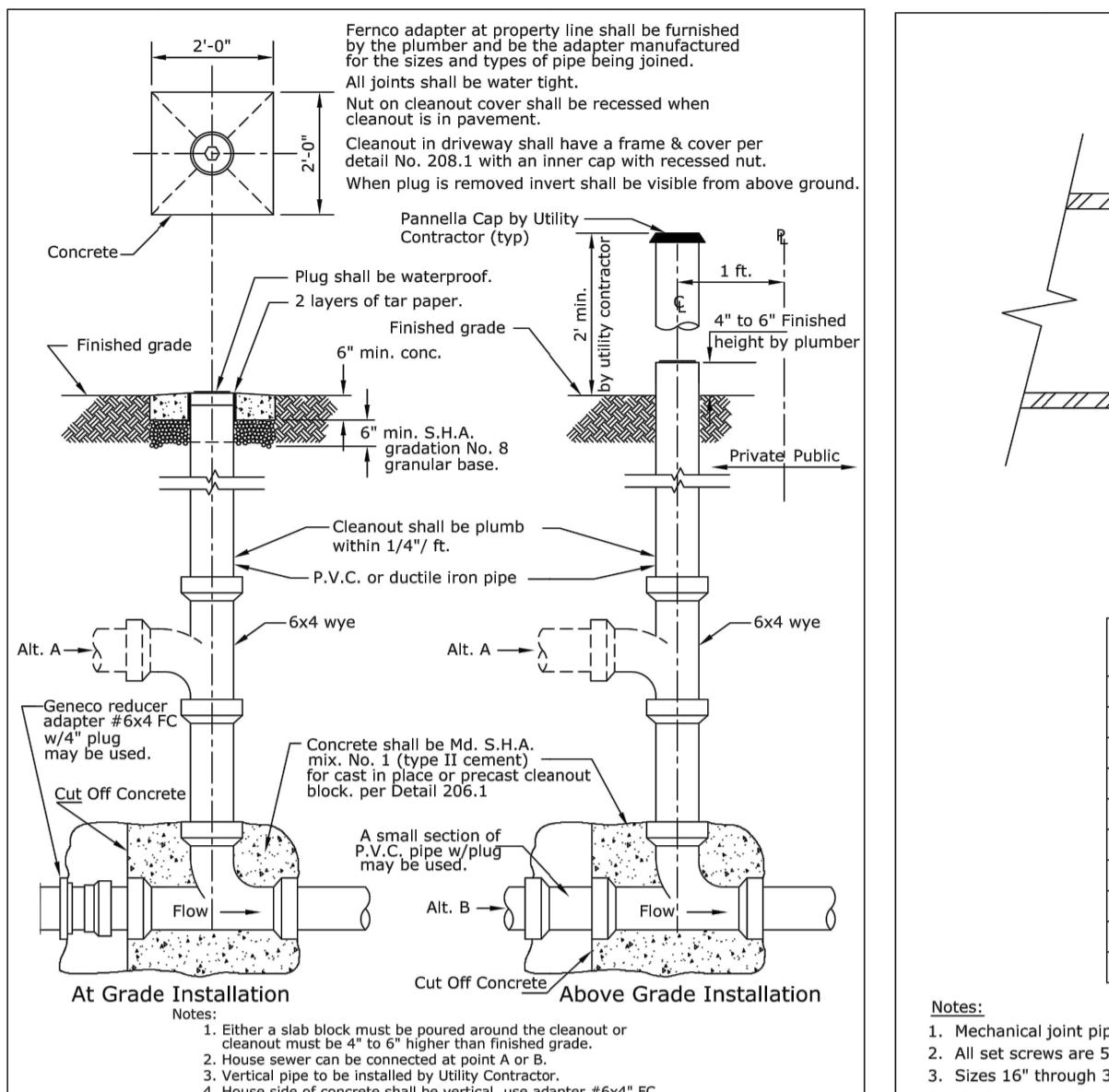
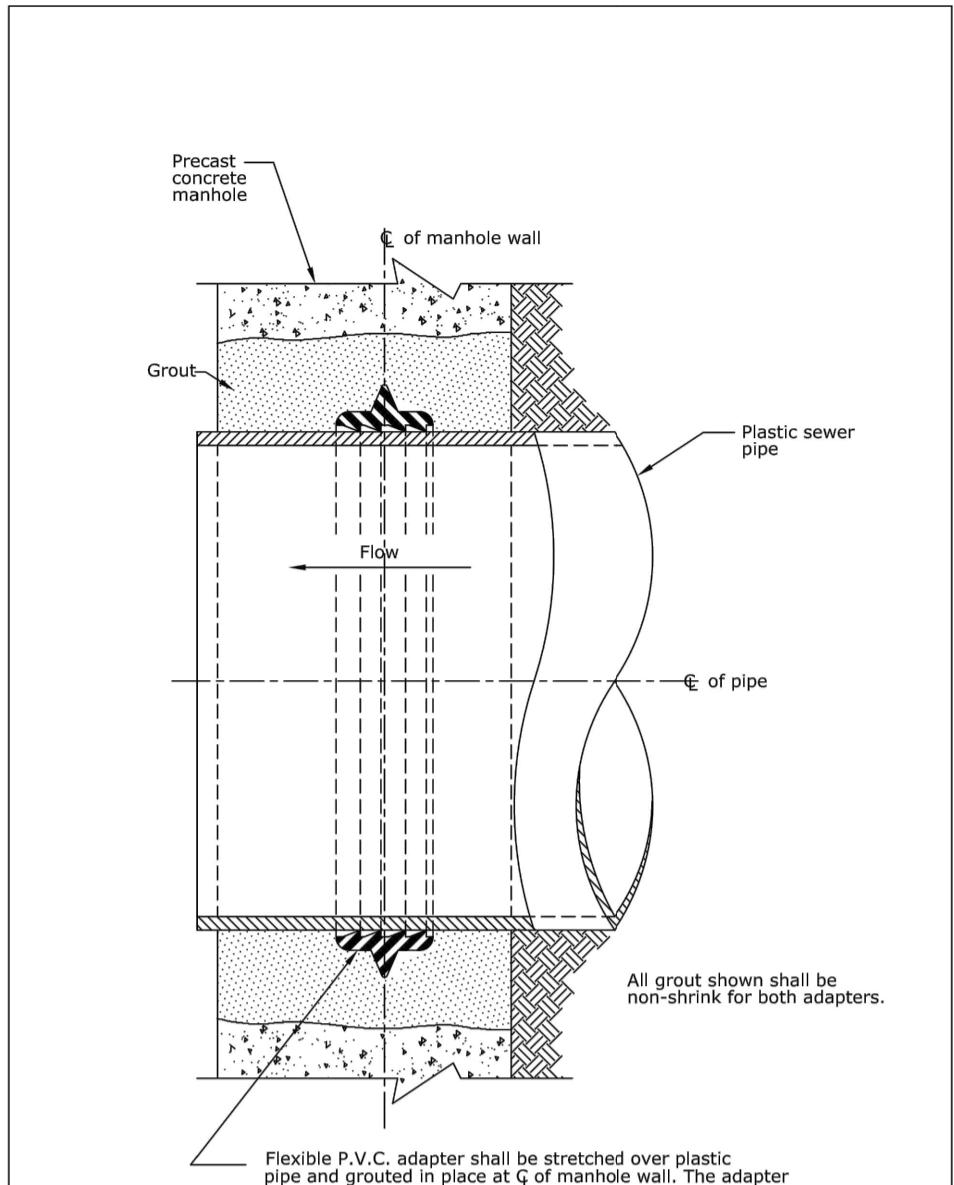
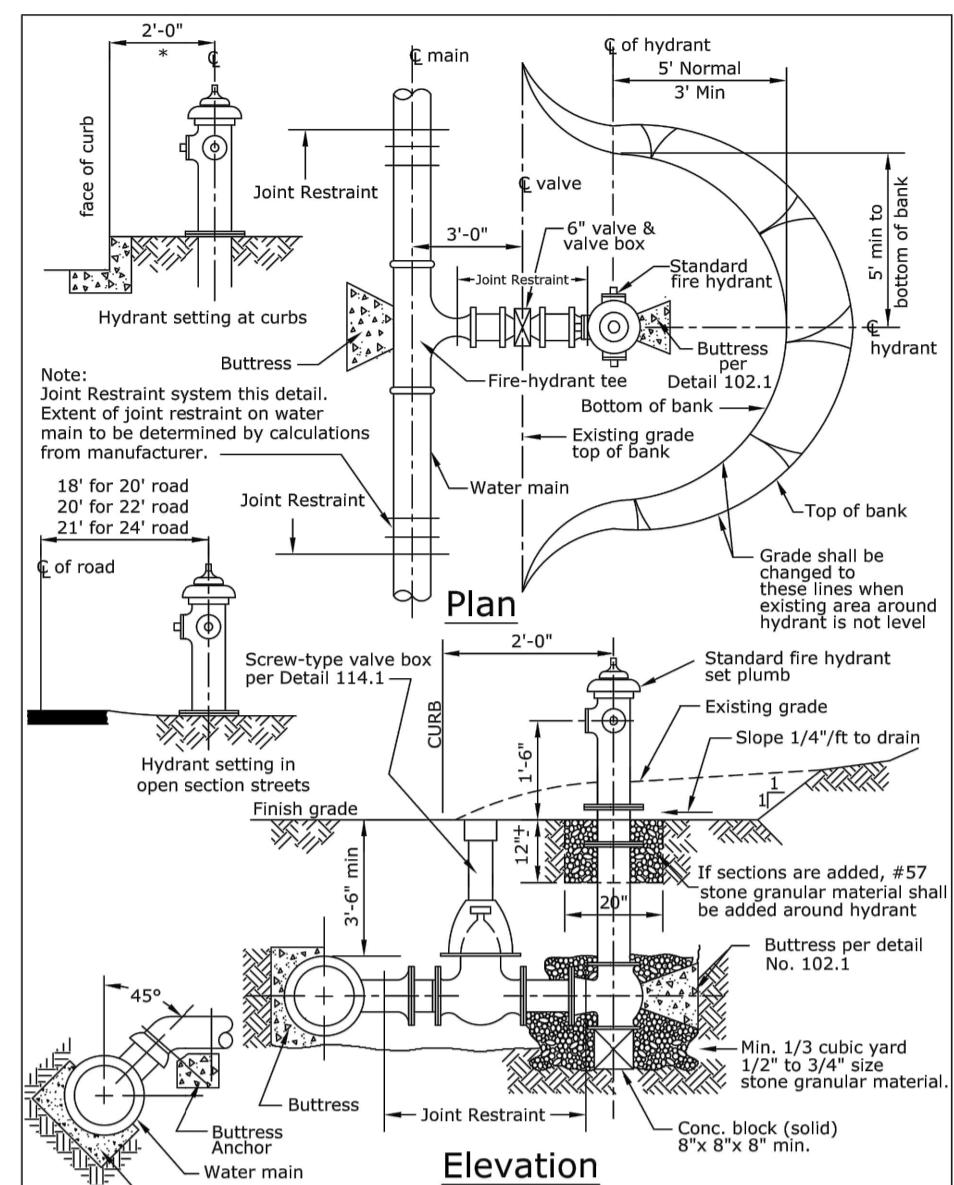
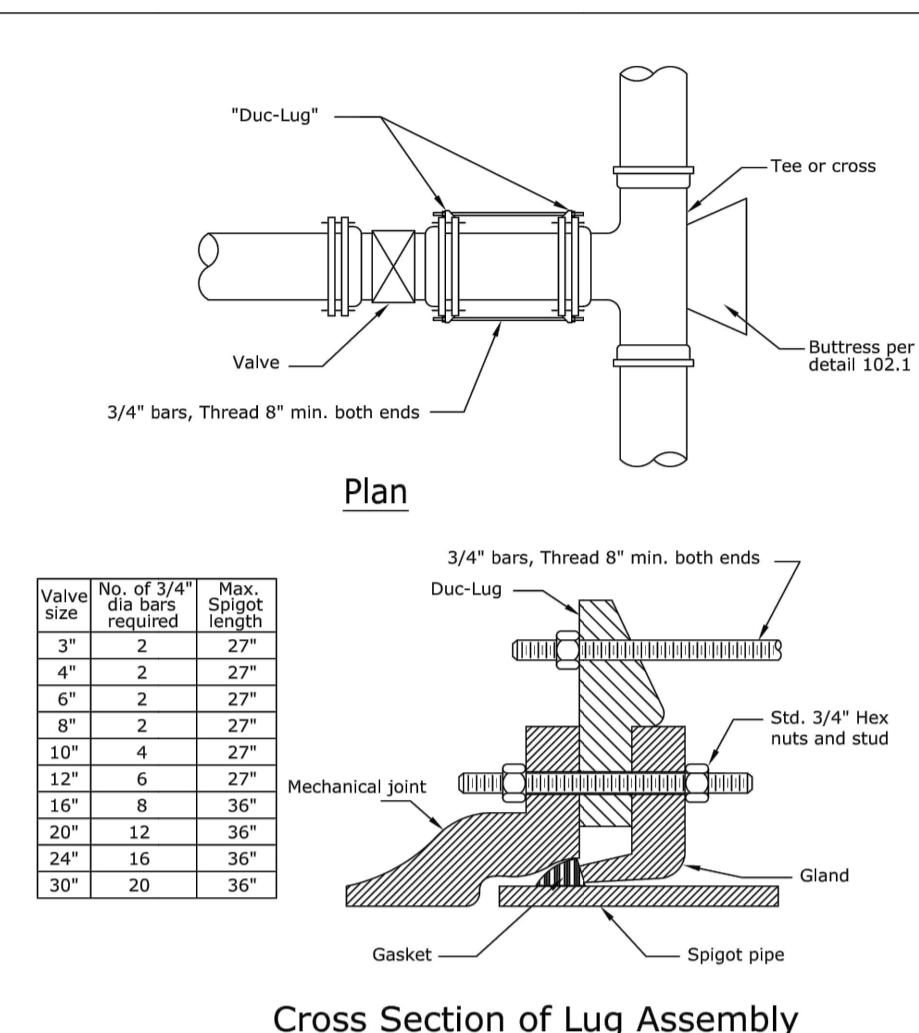
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WATER AND SEWER DETAILS - 1	REVISIONS: 06-13-22 - REVISED PER COUNTY COMMENTS 06-04-22 - REVISED PER COUNTY COMMENTS
<small>APPROVED BY ENGINEER/OWNER</small> <small>Signature: _____ Date: _____</small>	
SCALES: AS SHOWN DRAWN DRAWN BY: RLP CHECKED BY: MAN DATE: MAY 2022 SHEET: C-11 PROJECT: 7566 C-11	SCALES: AS SHOWN DRAWN DRAWN BY: RLP CHECKED BY: MAN DATE: MAY 2022 SHEET: C-11 PROJECT: 7566 C-11



Division of Planning and Permitting
Department of Development
Review Engineering

APPROVED: 08/07/22

Signature:



OPTIONAL STANDARD DROP BOWL INSTALLATION KIT INCLUDES:

• (8) 3/8" 1" x 16" 18-8 STAINLESS HEX CAP SCREW FULL THREAD

• (8) 3/8" 18-8 STAINLESS WASHERS

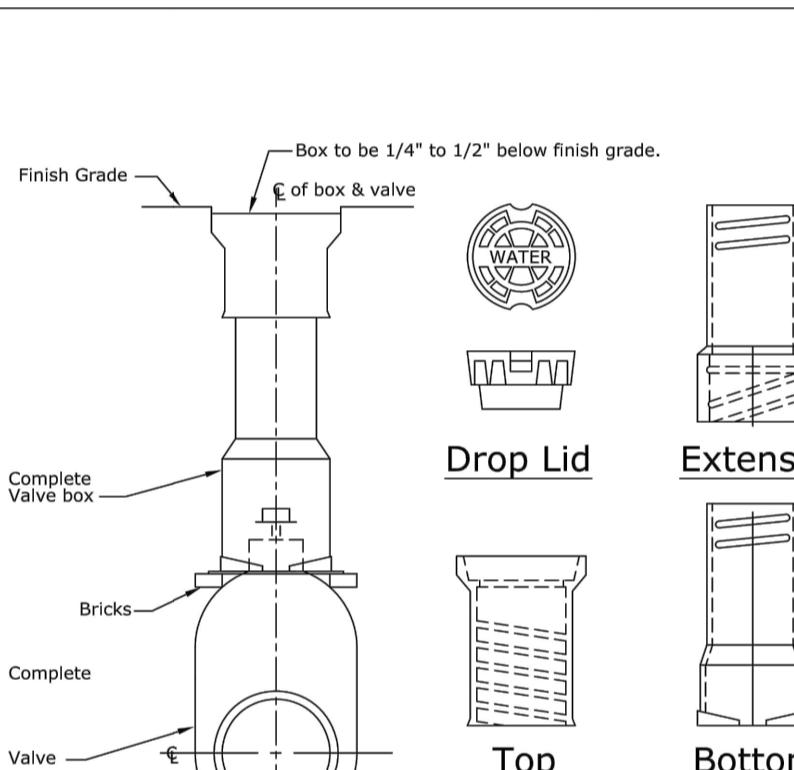
• (8) 3/8" 16 X 1-1/4" LEAD TAMP-IN EXPANSION ANCHORS

Cross Section of Lug Assembly

Notes:
1. Mechanical joint fittings only shall be used.
2. All steel shall be coated with two coats of bituminous paint, conforming to MIL-P-23236P, class 2.
3. If piping is to be used, it shall be coated with strapping and spigot pipe.
4. Tie bolts by "Star" are an approved equal to "Duc-Lugs".
5. "Duc-Lugs" only to be used when "Mega-Lug" restraint is not possible.
Use alternative to Mega-Lug restraints.

Frederick County Division of Utilities & Solid Waste Management Department of Engineering & Planning

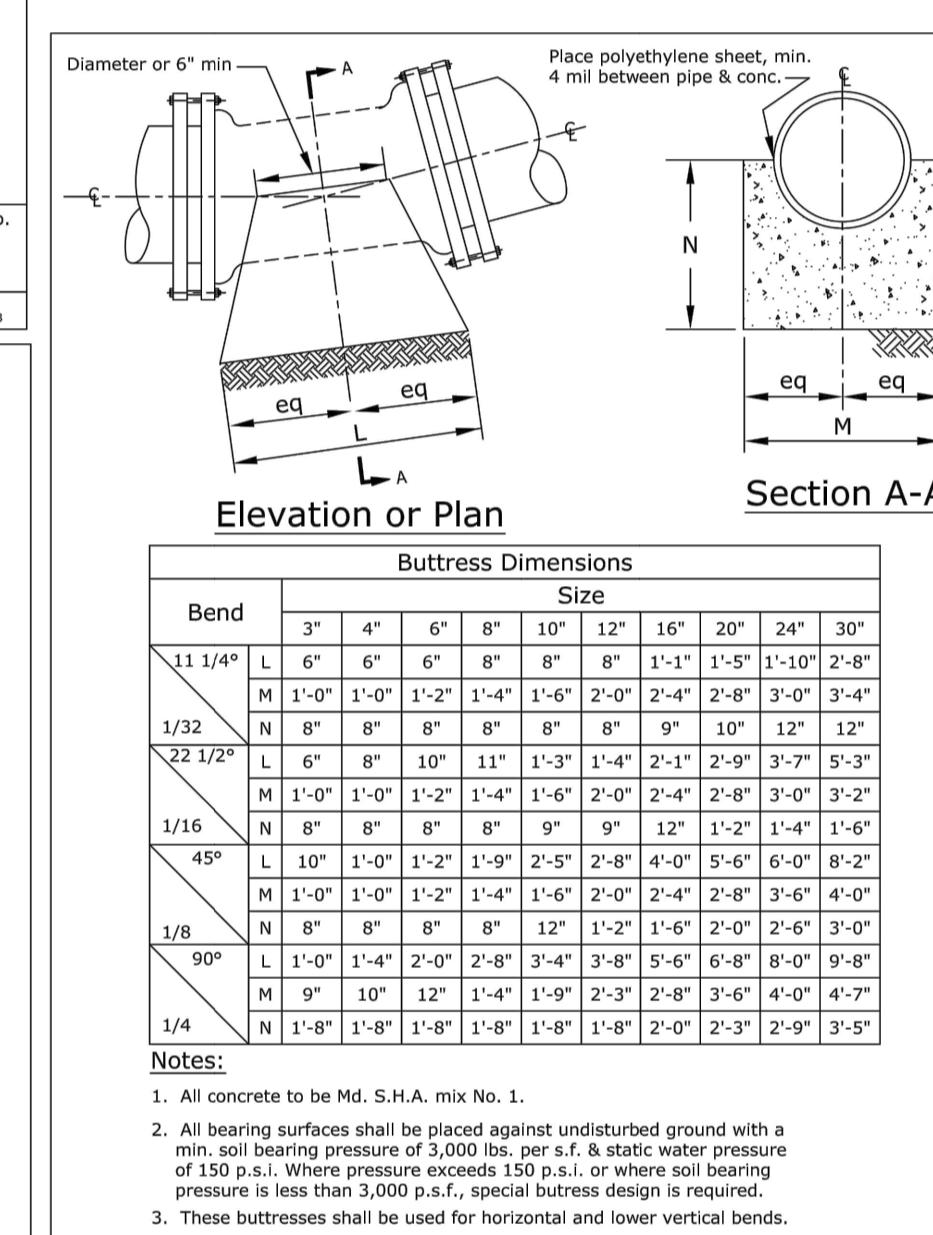
Method of Strapping Valve to Tee with "Duc-Lugs" Detail No. 107.1 Date: 02-01-2013



Notes:
1. Valve box bases shall be sized and installed so that valve box can not transfer loads to valves. Place base on bricks.
2. Valve box shall be adjusted to finished grade to allow future 6" diameter pipe to be installed.
3. Valve boxes shall be cast iron, screw type with 5-1/4" shaft by Tyler Pipe, General Engineering or equal.

Frederick County Division of Utilities & Solid Waste Management Department of Engineering & Planning

Valve Boxes for Water Mains Detail No. 114.1 Date: 02-01-2013



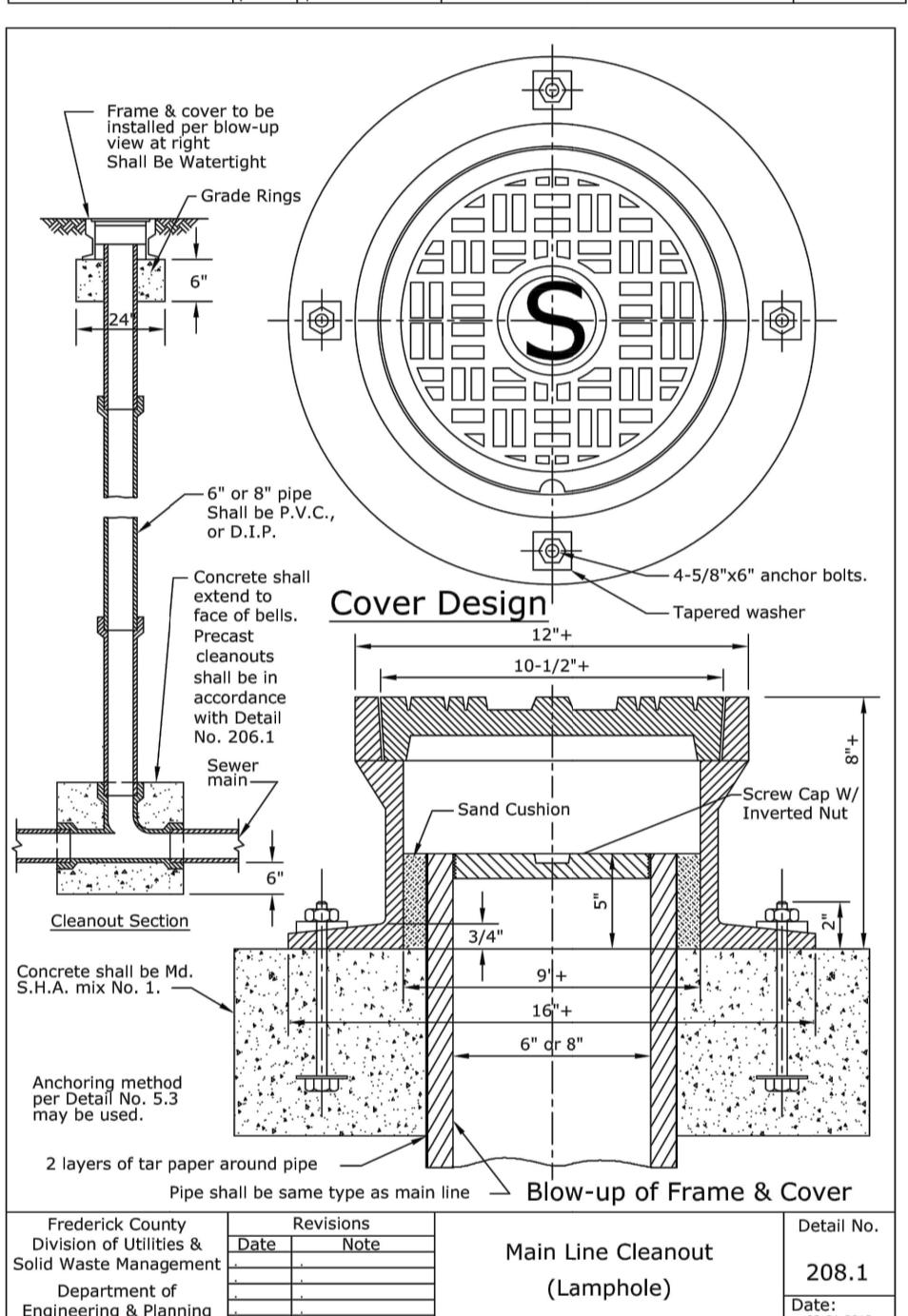
Notes:
1. All concrete to be Md. S.H.A. mix No. 1.
2. All bearing surfaces shall be placed against undisturbed ground with a min. soil bearing pressure of 3,000 lbs. per sq. ft. & static water pressure of 150 p.s.i. When pressure exceeds 150 p.s.i. or where soil bearing pressure is less than 1,000 p.s.i. specify larger size butresses.
3. These butresses shall be used for horizontal and lower vertical bends.
4. Mechanical joint restraint may be used in lieu of concrete butresses.

Frederick County Division of Utilities & Solid Waste Management Department of Engineering & Planning

Buttresses for Use at Horizontal and Lower Vertical Bends Detail No. 102.1 Date: 02-01-2013

Frederick County Division of Utilities & Solid Waste Management Department of Engineering & Planning

Main Line Cleanout (Lamphole) Detail No. 208.1 Date: 02-01-2013



Notes:
1. All concrete to be Md. S.H.A. mix No. 1.
2. All bearing surfaces shall be placed against undisturbed ground with a min. soil bearing pressure of 3,000 lbs. per sq. ft. & static water pressure of 150 p.s.i. When pressure exceeds 150 p.s.i. or where soil bearing pressure is less than 1,000 p.s.i. specify larger size butresses.
3. These butresses shall be used for horizontal and lower vertical bends.
4. Mechanical joint restraint may be used in lieu of concrete butresses.

Frederick County Division of Utilities & Solid Waste Management Department of Engineering & Planning

Buttresses for Use at Horizontal and Lower Vertical Bends Detail No. 102.1 Date: 02-01-2013

Frederick County Division of Utilities & Solid Waste Management Department of Engineering & Planning

Main Line Cleanout (Lamphole) Detail No. 208.1 Date: 02-01-2013

Frederick County Division of Utilities & Solid Waste Management Department of Engineering & Planning

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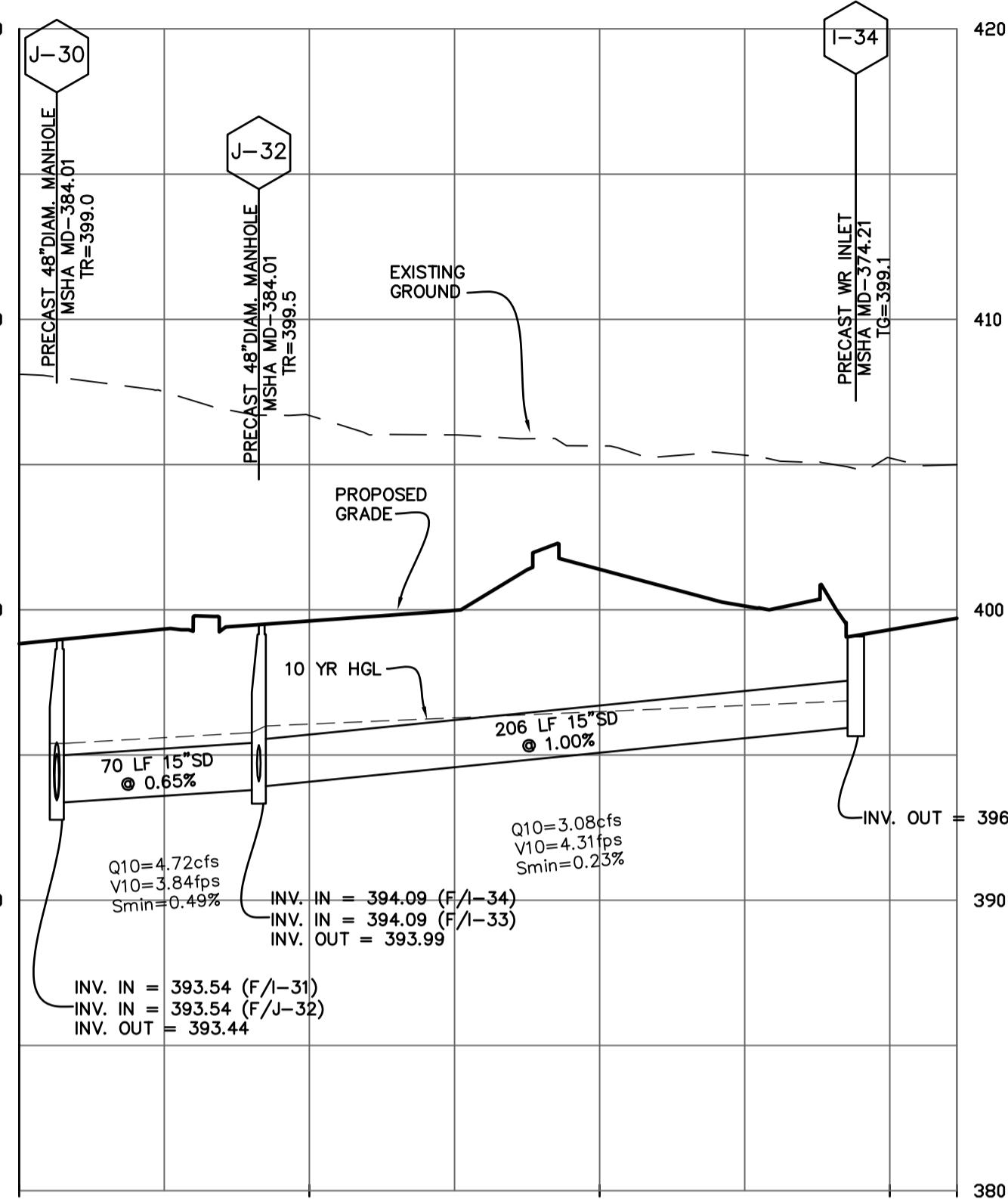
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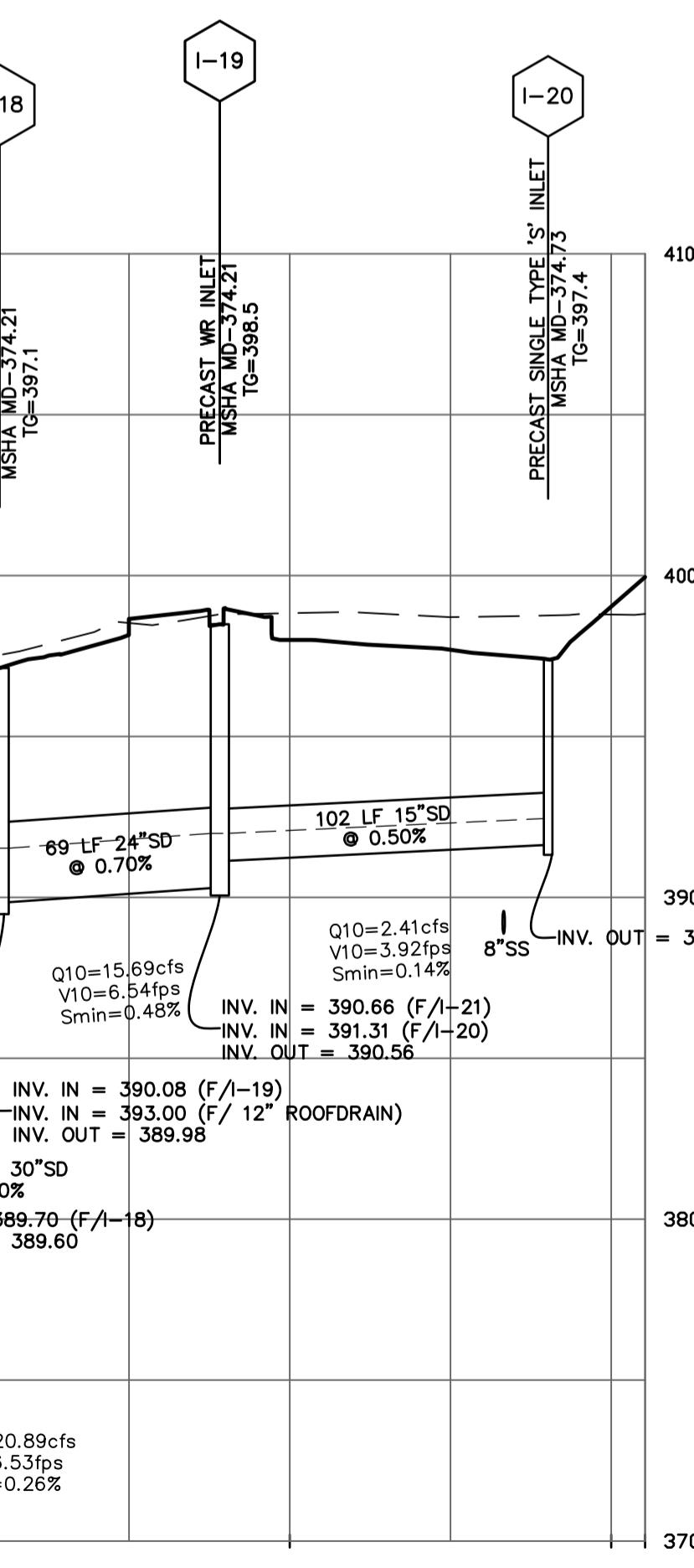
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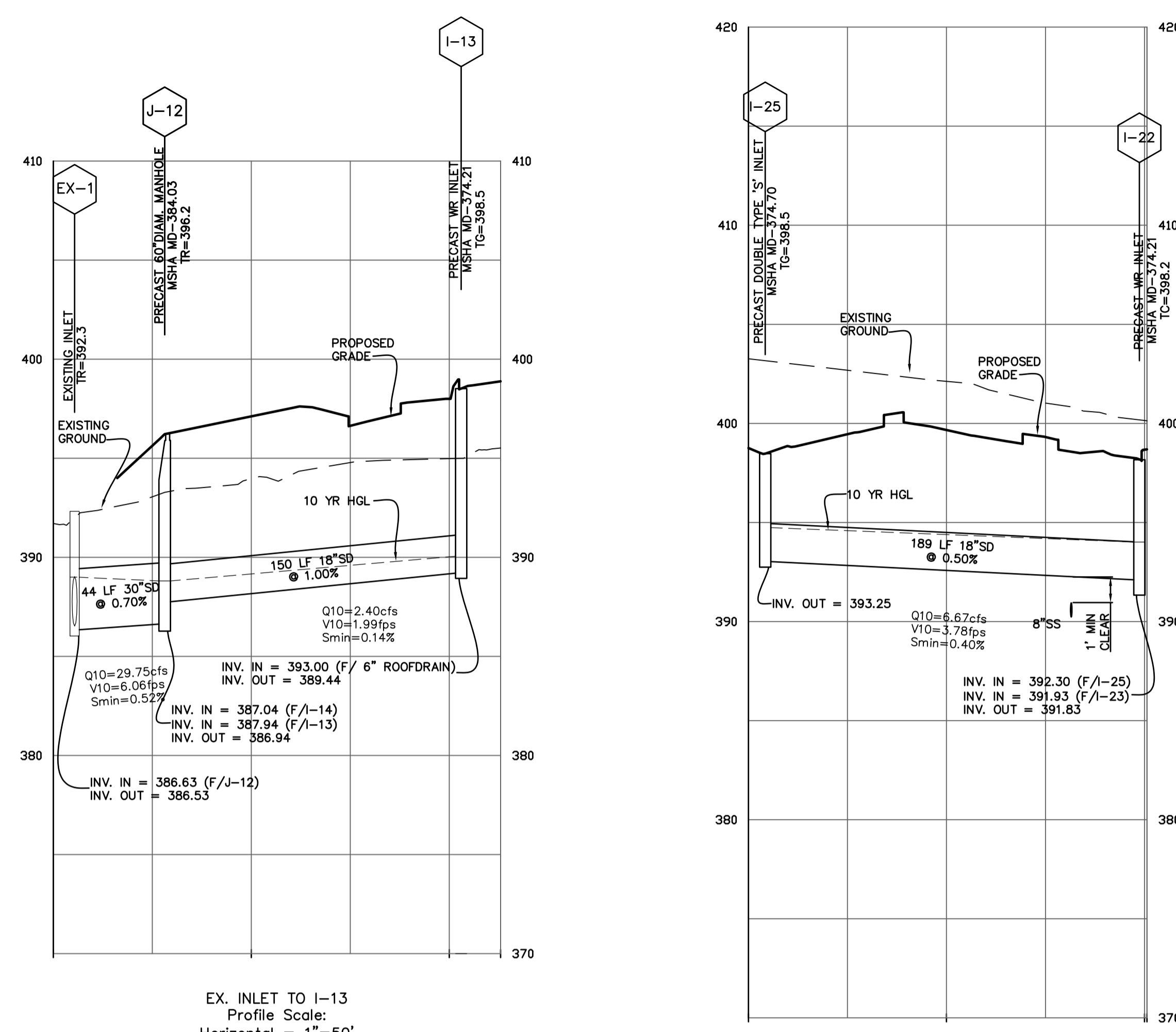
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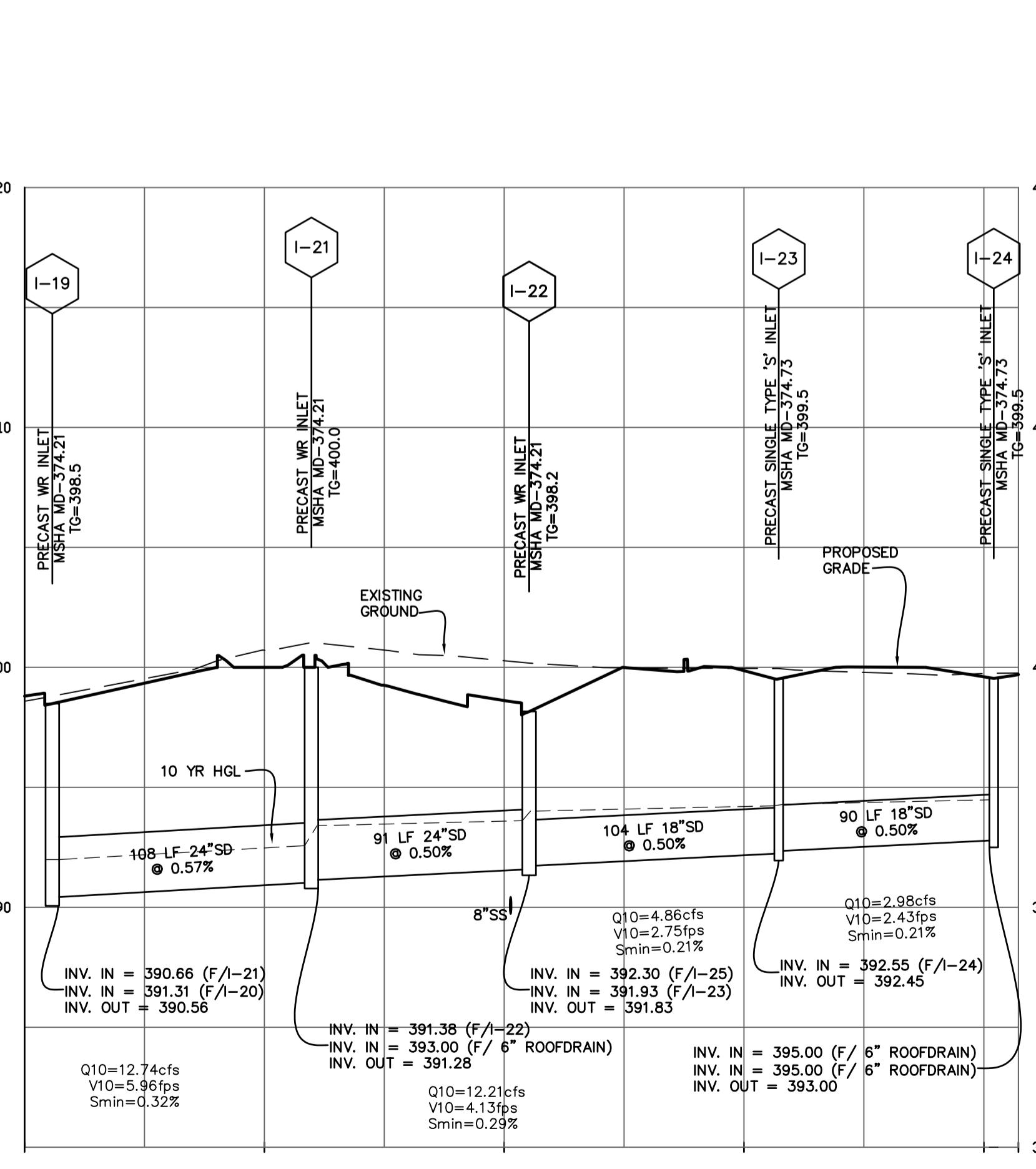
J-30 TO I-34
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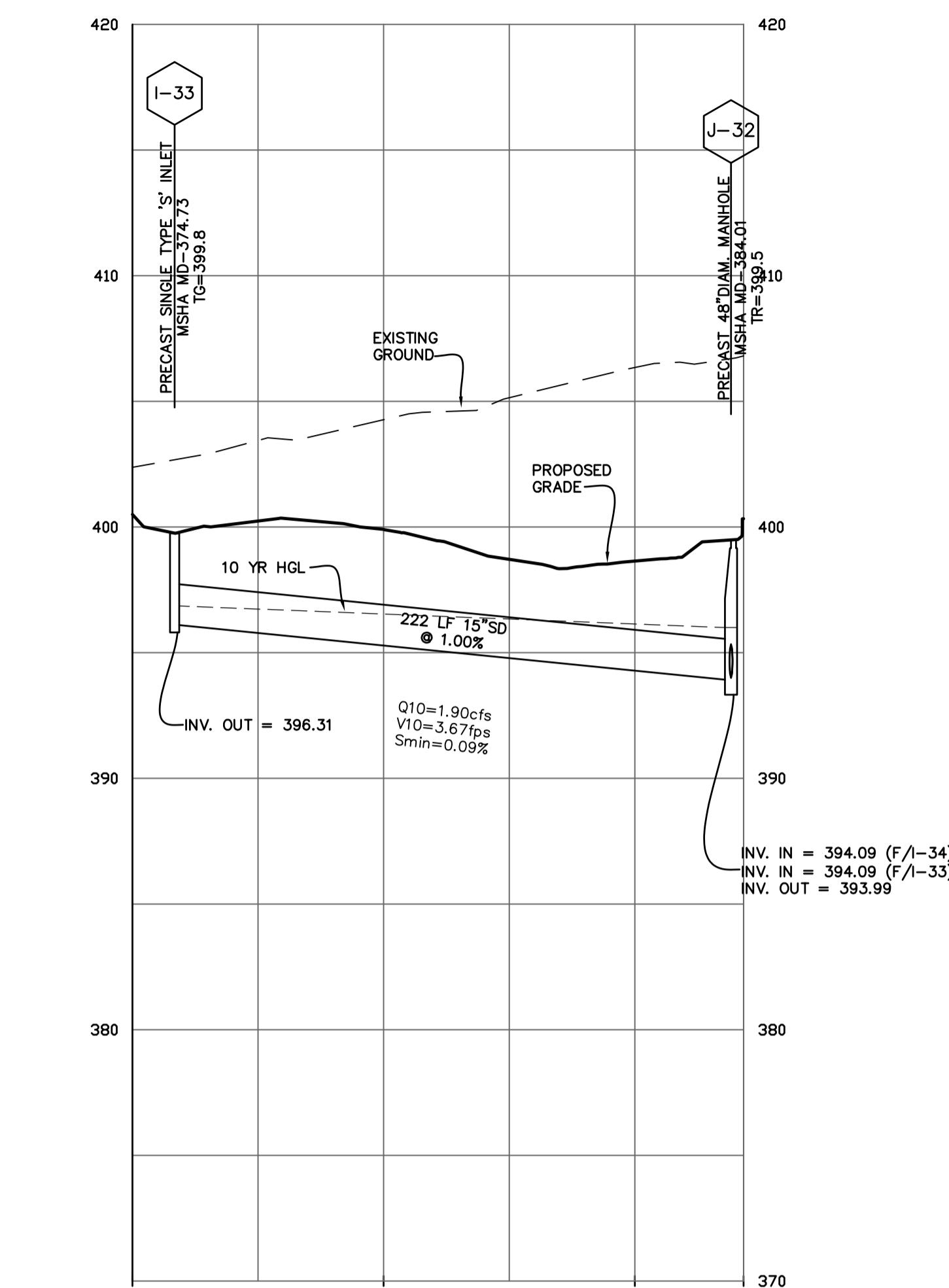
J-12 TO I-20
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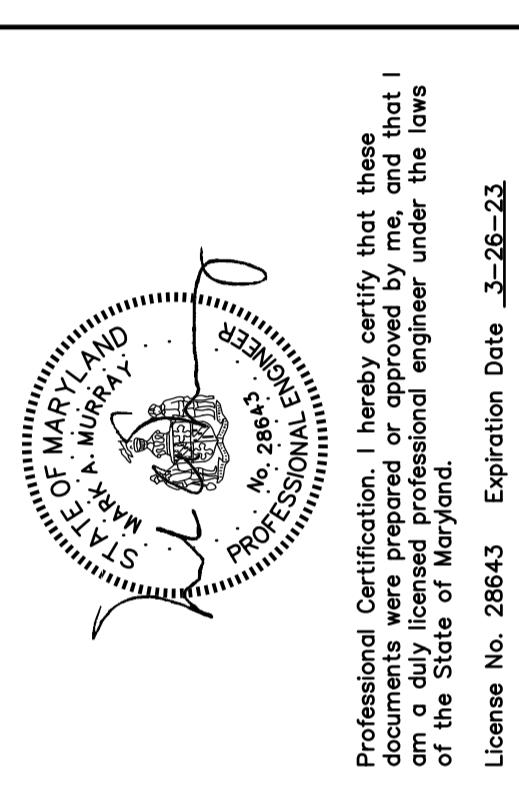
EX. INLET TO I-13
Profile Scale:
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Vertical = 1"=5'



I-19 TO I-24
Profile Scale:
Horizontal = 1"=50'
Vertical = 1"=5'



I-33 TO J-32
Profile Scale:
Horizontal = 1"=50'
Vertical = 1"=5'



Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 28643. Expiration Date 1-26-23.

HARRIS SMARIGA	
PLANNERS ENGINEERS • SURVEYORS	
125 CARROLL STREET SUITE 100 FREDERICK, MARYLAND 21701 P: 301.662.4488 F: 301.662.4906 www.harrismerga.com	
REVISIONS: 06/13/22 - REVISED PER COUNTY COMMENTS 06/04/22 - REVISED PER COUNTY COMMENTS	

JEFFERSON TECHNOLOGY PARK	
LOTS B-1 AND B-2	
SITUATED ON JEFFERSON STATION COURT FREDERICK COUNTY, MARYLAND	
S-PROJ-758 (DRAFT) 06/04/2022 3:07 PM	

BASIC STORMDRAIN NOTES

1. ALL STORM DRAIN TO BE SMOOTHBORE, HIGH-DENSITY POLYETHYLENE PIPE MEETING THE SPECIFICATIONS OF AASHTO M294, TYPE S (EXAMPLES ADS N-12 OR AN APPROVED EQUIVALENT). THE FOLLOWING STORMDRAIN MATERIALS MAY BE USED AS SUBSTITUTES:
 - a. ALUMINIZED, TYPE 2 COATED SPIRAL-REBBED CORRUGATED METAL PIPE (3/4"X3/4"X7-1/2" CORRUGATIONS) 16 GAGE.
 - b. REINFORCED CONCRETE PIPE, CLASS IV .
2. ALL BACKFILL TO BE PEAT THE PIPE MANUFACTURER'S SPECIFICATIONS AT A MINIMUM. TYPICAL BACKFILL SHALL BE STABLE MATERIALS SUCH AS FREE-DRaining SANDS AND GRAVELS ACCORDING TO ASTM D248, CLAS. II OR III MATERIALS AND BE PLACED IN LIFTS AS NECESSARY AND COMPACTED TO 95 PERCENT MINIMUM DRY DENSITY ACCORDING TO AASHTO T99 MINIMUM (PER AASHTO T180 IN ROAD RIGHT-OF-WAY AREAS).
3. CONTRACTOR SHALL MAINTAIN A MIN OF 1" VERTICAL CLEARANCE BETWEEN OUTSIDE OF STORM DRAIN PIPES AND ALL OTHER UTILITIES AT CROSSING.
4. INSTALL LADDER RUNGS PER MSHA STD. 383.91 OR 383.92.
5. LENGTH OF STORM DRAIN PIPE AND SLOPE IS FROM CL STRUCTURE TO CL STRUCTURE.
6. WHEN STORM DRAIN PIPE ENTERS MANHOLE OR INLET STRUCTURE FIVE(S) FEET OR MORE ABOVE THE BOTTOM OF THE STRUCTURE INVERT, PROVIDE GRANITE DRIP STONES AND GRANITE BLOCK INVERT BOTTOM. SEE MSHA STD. 383.11 FOR CONFIGURATION & DETAILS.
7. ALL PROPOSED STORM DRAIN SHALL BE WATERTIGHT, SMOOTHBORE HIGH DENSITY POLYETHYLENE PIPE. SHALL UTILIZE TIGHT-SEAL GASKETS AND RUBBER GASKETS. EXAMPLES INCLUDE HANCOCK TITELINE ADS PROLINK-WT OR AN APPROVED EQUIVALENT. IF AN ALTERNATIVE PIPE MATERIAL IS USED THEN THE FOLLOW MAY BE USED AS SUBSTITUTES:
 - a. WATERTIGHT ALUMINIZED, TYPE 2 CORRUGATED METAL PIPE SHALL USE RUBBER O-RING GASKETS, RUBBER SLEEVE GASKETS, STRIP GASKET OR GEOTEXTILE WRAP IN CONJUNCTION WITH AN APPROPRIATE BAND CONNECTOR.
 - b. REINFORCED CONCRETE PIPE SHALL UTILIZE RUBBER O-RINGS, RUBBER STRIP GASKETS OR OTHER ACCEPTABLE WATERTIGHT PRACTICES.

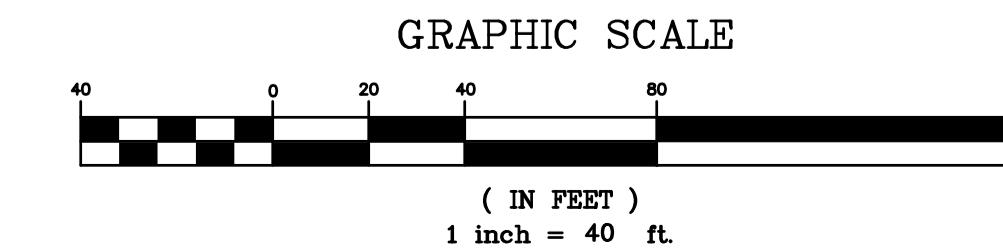
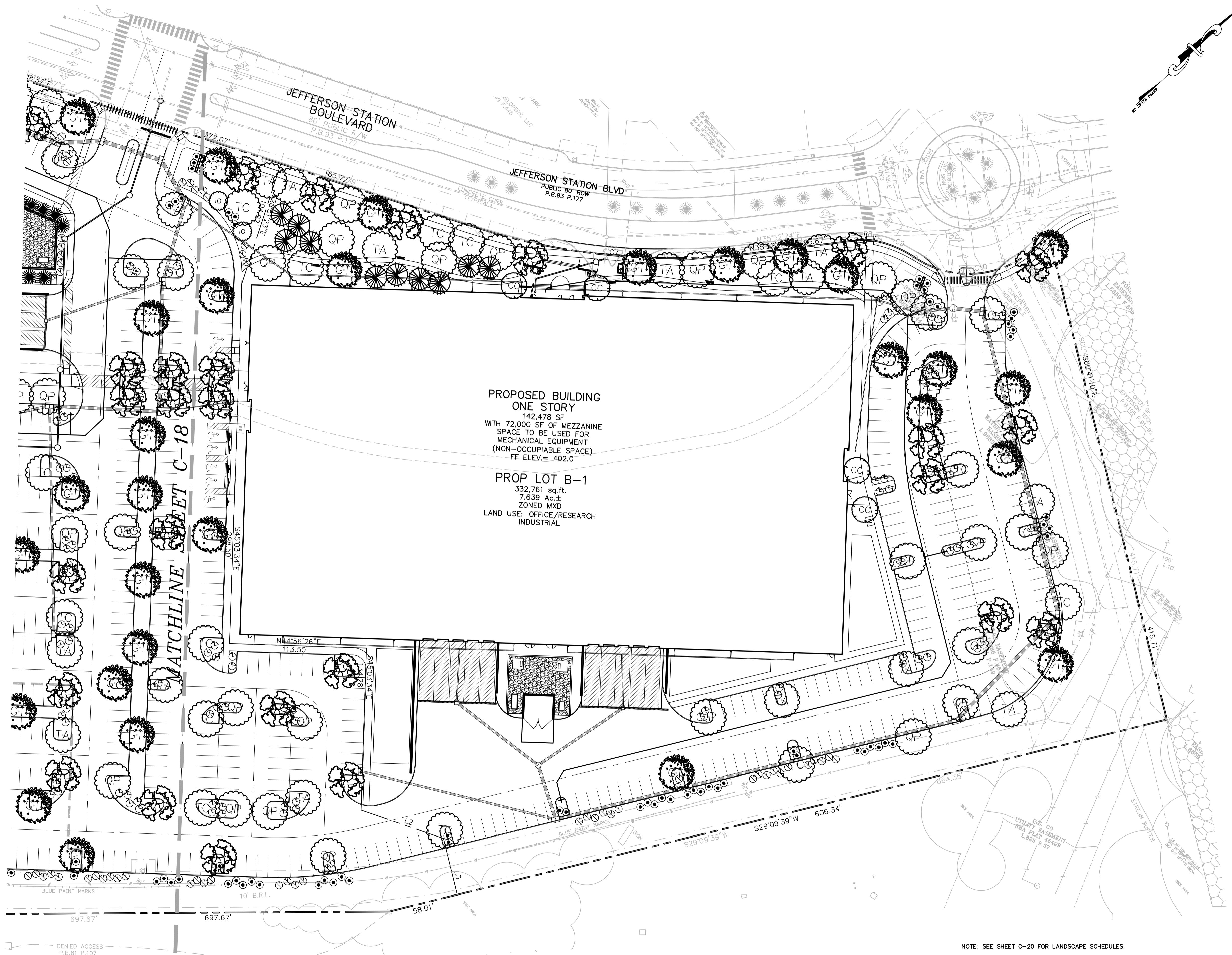
NOTE:

1. ALL STORM DRAIN IS PRIVATE UNLESS OTHERWISE NOTED.
2. ALL UTILITIES TO HAVE 1' OF VERTICAL SEPARATION MINIMUM.
3. ALL PIPES SIZED 27" TO BE REINFORCED CONCRETE PIPE, CLASS IV

FREDERICK SOIL CONSERVATION DISTRICT APPROVED BY DATE: 7-20-22	
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S.C.D. APPROVAL FOR SEDIMENT AND EROSION CONTROL IS CONTINGENT UPON ISSUANCE OF ALL APPLICABLE REGULATORY PERMITS.

SCALE: AS SHOWN DRAWN DRAFT DRAWN BY: RLP CHECKED BY: MAN DATE: MAY 2022	SHET: C-14 OF: 21 PROJECT: 756 C-14
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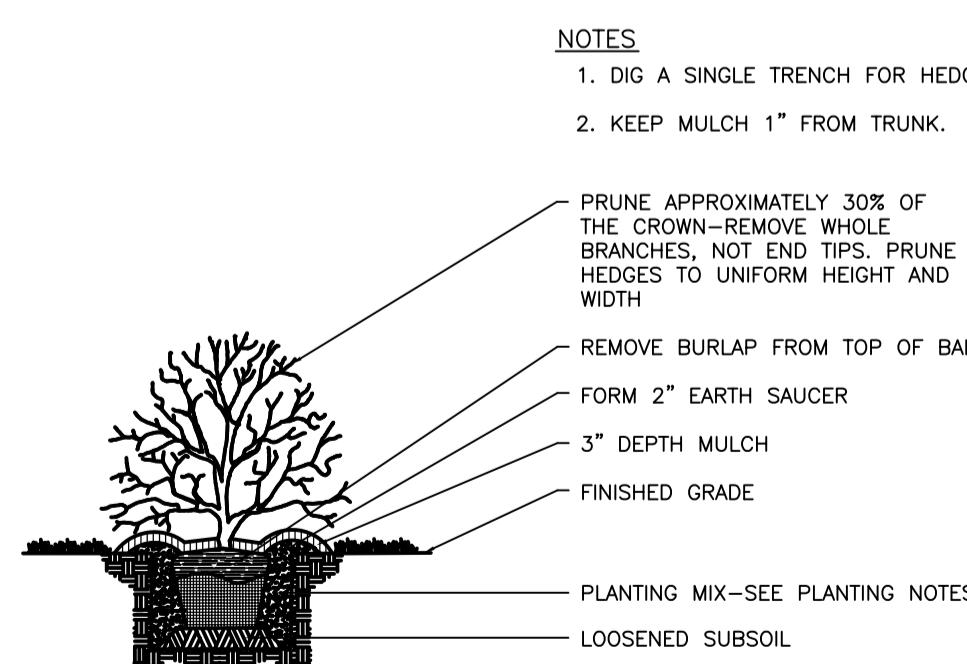


HARRIS SMARIGA PLANNERS ENGINEERS • SURVEYORS	
125 S. CARROLL STREET SUITE 100 FREDERICK MARYLAND 21701 P. 301.662.4488 F. 301.662.4906 www.harrismarygal.com	
REVISIONS:	
06/13/22	REVISED PER COUNTY COMMENTS
06/30/22	REVISED PER COUNTY ZCD COMMENTS
06/04/22	REVISED PER COUNTY COMMENTS
JEFFERSON TECHNOLOGY PARK LOTS B-1 AND B-2	
SITUATED ON JEFFERSON STATION COURT B-1 & B-2 LANDSCAPE PLANS B-1 & B-2 FREDERICK COUNTY, MARYLAND	
SHEET C-19 OF 21	
PROJECT: 7566	
L-PROJ7566/1996 ENGINEERING	
7/22/2022 10:05 AM	



LANDSCAPE TABLE B-1						
KEY	QTY	COMMON NAME	LATIN NAME	REMARKS	SIZE	NATIVE
TA	7	AMERICAN LINDEN	TILIA AMERICANA	B&B	2-2-1/2" CAL	Y
CC	4	EASTERN REDBUD	CERCIS CANADENSIS	B&B	2-2-1/2" CAL	Y
GT	9	HONEY LOCUST	GLEBITSIA TRIACANTHOS INERMIS	B&B	2 - 2 1/2" CAL	Y
	38	INKBERRY	ILEX GLABRA	CONT.	2-3' HGT.	Y
TC	10	LITTLELEAF LINDEN	TILIA CORDATA	B&B	2-2-1/2" CAL	Y
	5	OCTOBER GLORY RED MAPLE	ACER RUBRUM 'OCTOBER GLORY'	B&B	2-2-1/2" CAL	Y
	10	VIRGINIA PINE	PINUS VIRGINIANA	B&B	6-8' HGT.	Y
	42	VIRGINIA SWEETSPIRE	ITEA VIRGINICA	CONT.	2-3' HGT.	Y
QP	11	WILLOW OAK	QUERCUS PHELLOS	B&B	2" CAL	Y
	24	WINTERBERRY HOLLY	ILEX VERTICILLATA	CONT.	2-3' HGT.	Y

STREET TREES B-1						
KEY	QTY	COMMON NAME	LATIN NAME	REMARKS	SIZE	NATIVE
TA	3	AMERICAN LINDEN	TLILIA AMERICANA	B&B	2-2-1/2" CAL	Y
GL	5	HONEY LOCUST	GLEBITSIA TRIACANTHOS INERMIS	B&B	2 - 2 1/2" CAL	Y
TC	2	LITTLELEAF LINDEN	TLILIA CORDATA	B&B	2-2-1/2" CAL	Y
OK	5	OCTOBER GLORY RED MAPLE	ACER RUBRUM 'OCTOBER GLORY'	B&B	2-2-1/2" CAL	Y
QP	4	WILLOW OAK	QUERCUS PHELLOS	B&B	2" CAL	Y

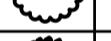


SHRUB PLANTING

DECIDUOUS AND EVERGREEN SHRUBS

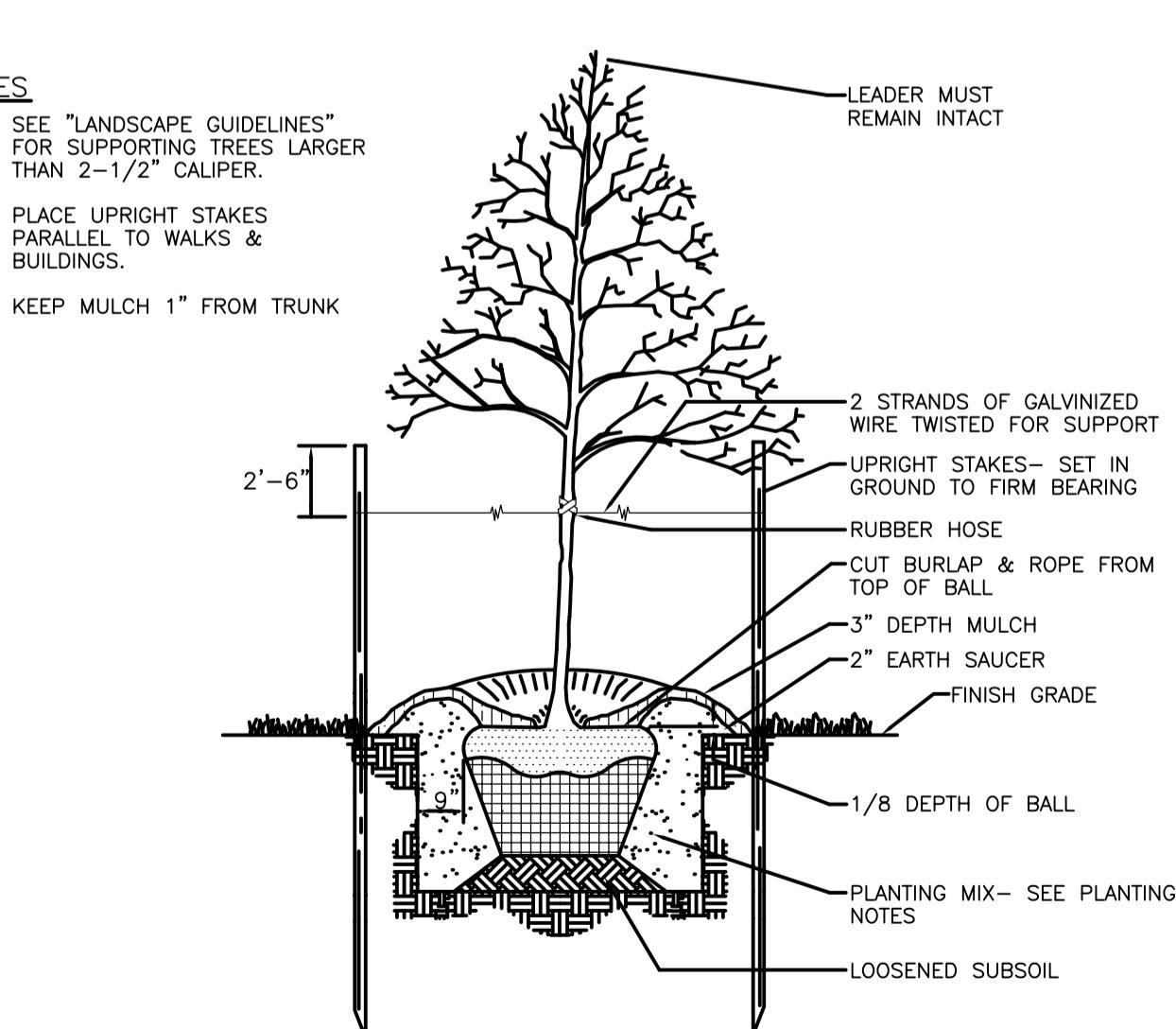
LANDSCAPE TABLE B-2

KEY	QTY	COMMON NAME	LATIN NAME	REMARKS	SIZE	NATIVE
IO	2	AMERICAN HOLLY	ILEX OPACA	B&B	2-2-1/2" CAL	Y
TA	20	AMERICAN LINDEN	TILIA AMERICANA	B&B	2-2-1/2" CAL	Y
CC	11	EASTERN REDBUD	CERCIS CANADENSIS	B&B	2-2-1/2" CAL	Y
GT	29	HONEY LOCUST	GLEDITSIA TRIACANTHOS INERMIS	B&B	2 - 2 1/2" CAL	Y
	129	INKBERRY	ILEX GLABRA	CONT.	2-3' HGT.	Y
TC	18	LITTLELEAF LINDEN	TILIA CORDATA	B&B	2-2-1/2" CAL	Y
	30	OCTOBER GLORY RED MAPLE	ACER RUBRUM 'OCTOBER GLORY'	B&B	2-2-1/2" CAL	Y
	149	VIRGINIA SWEETSPIRE	ITEA VIRGINICA	CONT.	2-3' HGT.	Y
QP	32	WILLOW OAK	QUERCUS PHELLOS	B&B	2" CAL	Y
	136	WINTERBERRY HOLLY	ILEX VERTICILLATA	CONT.	2-3' HGT.	Y
BN	4	RIVER BIRCH	BETULA NIGRA 'DURA HEAT'	3-5 EQUAL STEMS	14' HGT.	Y
AC	3	SERVICEBERRY	AMELANCHIER CANADENSIS	3-5 EQUAL STEMS	12' HGT.	Y
.	4	ROYAL PURPLE SMOKETREE	COTINUS COGGYRIA 'ROYAL PURPLE'	B&B	2" CAL.	Y
MV	9	SWEETBAG MAGNOLIA	MAGNOLIA VIRGINIANA	3-5 STEMS	12' HGT.	Y
	21	GREEN GIANT ARBORVITAE	THUJA X GREEN GIANT	B&B	2-2-1/2" CAL	N

STREET TREES B-2						
KEY	QTY	COMMON NAME	LATIN NAME	REMARKS	SIZE	NATIVE
	6	AMERICAN LINDEN	TEILIA AMERICANA	B&B	2-2-1/2" CAL	Y
	7	HONEY LOCUST	GLEBITSIA TRIACANTHOS INERMIS	B&B	2 - 2 1/2" CAL	Y
	9	LITTLELEAF LINDEN	TEILIA CORDATA	B&B	2-2-1/2" CAL	Y
	7	OCTOBER GLORY RED MAPLE	ACER RUBRUM 'OCTOBER GLORY'	B&B	2-2-1/2" CAL	Y
	6	WILLOW OAK	QUERCUS PHELLOS	B&B	2" CAL	Y

LANDSCAPING GENERAL NOTES:

1. TOTAL NUMBER OF PLANTS SHALL BE VERIFIED ON THE LANDSCAPE PLAN. IF THIS TOTAL DIFFERS FROM THE PLANT KEY, THE PLAN SHALL GOVERN.
 2. IF A PLANT IS FOUND NOT TO BE SUITABLE OR AVAILABLE, THE LANDSCAPE CONTRACTOR IS TO NOTIFY HARRIS, SMARIGA AND ASSOCIATES FOR AN ACCEPTABLE SUBSTITUTE.
 3. ALL PLANT MATERIAL SHALL CONFORM TO THE QUALITY SPECIFICATIONS DESCRIBED IN THE CURRENT ISSUE OF THE AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERY-MEN.
 4. ALL PLANTING SPECIFICATIONS AND PROCEDURES SHALL FOLLOW THE STANDARDS SET FORTH IN THE LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS.
 5. EXISTING UTILITIES ARE SHOWN FROM BEST AVAILABLE RECORDS. CONTRACTOR SHALL FIELD VERIFY ALL LOCATIONS AND ELEVATIONS TO HIS OWN SATISFACTION PRIOR TO CONSTRUCTION. ANY UTILITY (WHETHER SHOWN OR NOT) DAMAGED DUE TO CONSTRUCTION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL AT COMMENCEMENT OF CONSTRUCTION, UNCOVER ALL PROPOSED CONNECTION POINTS TO VERIFY LOCATION OF EXISTING UTILITIES.
 6. IF SOIL AT PLANTING SITES IS WET OR COMPACTED, ALL CONTAINER AND BALLED NURSERY STOCK SHOULD BE PLANTED SUCH THAT THE TOP ONE-THIRD OF THE ROOTBALL IS ABOVE EXISTING GRADE.
 7. EXISTING TREES AND PLANTS THAT ARE TO BE SAVED SHOULD BE PROTECTED DURING CONSTRUCTION. CONTACT THE MARYLAND FOREST SERVICE AT 301-473-8417 FOR RECOMMENDATIONS. MEASURES FOR PROTECTION SHOULD INCLUDE BUT ARE NOT LIMITED TO; PROVIDE STOUT FENCING AROUND TREES AND AREAS TO BE SAVED, FENCING SHOULD REMAIN IN PLACE THROUGHOUT ALL PHASES OF CONSTRUCTION; RESTRICTING USE OF MACHINERY UNDER THE DRIP LINE TO AVOID MECHANICAL INJURY OR SOIL COMPACTION, IF CONSTRUCTION TRAFFIC IS NECESSARY WITHIN THIS AREA, TEMPORARY MULCH SHOULD BE USED TO MINIMIZE SOIL COMPACTION; PROHIBITING STORAGE OF MATERIALS IN THE PROTECTION AREA; EXCAVATION AROUND TREE ROOTS SHOULD BE COMPLETED BY HAND; ROOTS WHICH NEED TO BE REMOVED DURING CONSTRUCTION SHOULD BE CUT CLEANLY AND NOT RIPPED OUT WITH HEAVY MACHINERY; LARGE ROOTS SHOULD BE LEFT TO BRIDGE TRENCHES; TUNNEL BENEATH ROOT SYSTEMS FOR UTILITIES RATHER THAN TRENCHING; BACKFILL EXPOSED ROOTS AS SOON AS POSSIBLE; CHANGES IN GRADE LEVEL WITHIN THE DRIP LINE OF EXISTING VEGETATION SHALL BE AVOIDED IF POSSIBLE; USE RETAINING WALLS, TERRACES OR OTHER MEASURES TO AVOID AN EXCAVATING WITHIN THIS AREA; WHEN FILLING WITHIN THIS AREA PROVIDE AERATION LAYERS OF 1' DEEP MINIMUM 2-3" AGGREGATE BEDS WITH TREE WELLS; PROVIDE ADEQUATE DRAINAGE TO OR AWAY FROM ROOTS; AND AVOID DAMAGE TO PRESERVATION AREAS DURING TIMES OF DEBRIS REMOVAL AND DEBRIS BURNING.
 8. LANDSCAPE CONTRACTOR IS TO PROVIDE A 1 YEAR GUARANTEE FOR ALL PLANT MATERIAL AND OTHER WORK DONE ON THE SITE.
 9. REMOVE UPPER 1/3 OF BURLAP, ALL WIRE AND NONDEGRADABLE MATERIALS BEFORE BACKFILLING ANY PLANT MATERIAL. ALL GUY WIRES AND STAKES ARE TO BE REMOVED ONE YEAR AFTER PLANT MATERIAL INSTALLATION.
 10. REMOVE ALL EXISTING GUY WIRES AND STAKES FROM ALL TREES ON ENTIRE SITE

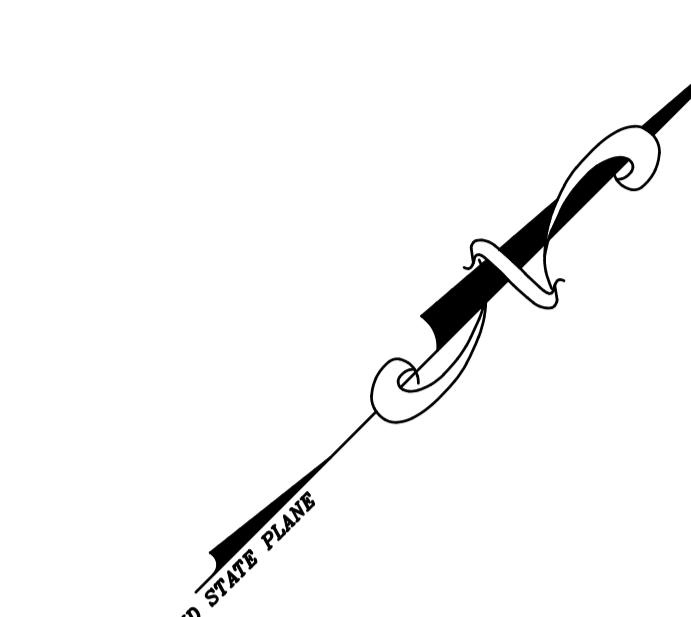


TREE PLANTING AND STAKING

DECIDUOUS AND EVERGREEN TREES

NOT TO SCALE

SCALE: AS SHOWN	LANDSCAPE SCHEDULES AND DETAILS		
DRAWN BY: RLP	JEFFERSON TECHNOLOGY PARK		
CHECKED BY: MAM	LOTS B-1 AND B-2		
DATE: MAY 2022	REVISIONS:	06.13.22 – REVISED PER COUNTY COMMENTS	
SHEET: C-20 OF: 21		06.30.22 – REVISED PER COUNTY/SCD COMMENTS	
PROJECT: 7526		08.04.22 – REVISED PER COUNTY COMMENTS	
C-20			
 <p>HARRIS SMARIGA</p> <p>PLANNERS • ENGINEERS • SURVEYORS</p> <p>125 S. CARROLL STREET SUITE 100 FREDERICK MARYLAND 21701 P.301.662.4488 F.301.662.4906 www.harrissmariga.com</p>			



D-Series Size 0
LED Area Luminaire

Introduction
The modern styling of the D-Series is striking yet unobtrusive, making a bold, progressive statement without alienating the environment. The D-Series distills the benefits of the classic pole-mounted luminaire into a performance, high-efficacy, long-life luminaire. The outstanding photometric performance results from a combination of wider pole spacing and lower power density. It is ideal for replacing up to 400W metal halide with typical energy savings of 75% and expected service life of over 100,000 hours.

Ordering Information

EXAMPLE: DSX0 LED P6 40K T3M MVOLT SPA NLTAR2 PIR IN DDBXD

Model	Color Temperature	Mounting	Wattage	Ordering
DSX0	3000K	PIR	40W	DSX0 LED P6 40K T3M MVOLT SPA NLTAR2 PIR IN DDBXD
DSX0	4000K	PIR	40W	DSX0 LED P6 40K T4M MVOLT SPA NLTAR2 PIR IN DDBXD
DSX0	5000K	PIR	40W	DSX0 LED P6 50K T5M MVOLT SPA NLTAR2 PIR IN DDBXD
DSX0	6000K	PIR	40W	DSX0 LED P6 60K T6M MVOLT SPA NLTAR2 PIR IN DDBXD

Specifications

EPAL: 0.15 M²

Length: 26"

Width: 13"

Height: 3"

Height: 3"

Weight: 16 lbs

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