

SESC NOTES

1. PURSUANT TO PART 91 OF 1994 PA 451, SOIL EROSION AND SEDIMENTATION CONTROL (SESC), AS AMENDED, THE DMVA HAS ESTABLISHED SESC PROCEDURES TO PROVIDE "EFFECTIVE SOIL EROSION AND SEDIMENTATION CONTROL, INSPECTION, ENFORCEMENT AND SEDIMENT POLLUTION ABATEMENT OR PREVENTION". AS AN AUTHORIZED PUBLIC AGENCY (APA), THE DMVA IS RESPONSIBLE FOR CONTROLLING EROSION AND OFFSITE SEDIMENTATION ON ALL DMVA CONSTRUCTION PROJECTS, AND FROM APPLICABLE MILITARY CONSTRUCTION TRAINING ACTIVITIES AT DMVA FACILITIES. THIS RESPONSIBILITY CANNOT BE TRANSFERRED TO THE DESIGNER OR CONTRACTOR. HOWEVER, THEIR CONTRACTS (AND AGREEMENTS WITH OTHER MILITARY ENTITIES) CAN INCLUDE PENALTIES FOR NON-COMPLIANCE WITH SESC PROVISIONS THAT ARE INCLUDED IN THE CONTRACT DOCUMENTS. TO ASSIST DMVA'S CONSTRUCTION & FACILITIES MANAGEMENT OFFICE (CFMO) WITH ENSURING COMPLIANCE WITH PART 91 OF 1994 PA 451, A SESC PROGRAM HAS BEEN ESTABLISHED. THE SESC PROGRAM INCORPORATES DMVA STAFF AND THE PROCEDURES IN THIS GUIDEBOOK FOR THE CONTROL OF EROSION AND SEDIMENTATION. THE SESC PROGRAM FUNCTIONS INDEPENDENT OF THE CONSTRUCTION INSPECTION SERVICES BEING PROVIDED BY THE CFMO.
2. THE DMVA, AS APA, CAN ISSUE UP TO \$500 PER DAY PLUS ASSESSMENT OF ACTUAL DAMAGE COSTS FOR FAILURE TO IMPLEMENT THE SESC DESIGN AND CONSTRUCTION CONTRACTOR PREPARED AND APPROVED SESC IMPLEMENTATION PLAN. THE FINES AND FEES ARE FOR WHEN A CONTRACTOR REFUSES TO COMPLY WITH SESC REQUIREMENTS AND CORRECTIVE MEASURES CONTAINED IN THE CONSTRUCTION CONTRACT. FOR BONDED PROJECTS, THE SURETY COMPANY SHALL BE HELD RESPONSIBLE FOR THESE COSTS IN THE EVENT THE CONTRACTOR REFUSES TO PERFORM OR IS FOUND IN DEFAULT.
3. CONTRACTORS SHALL ENSURE THEIR BID INCLUDES 1) CONSTRUCTION SEQUENCING FOR SESC, 2) INSTALLATION, MAINTENANCE, AND REMOVAL OF TEMPORARY SESC CONTROL MEASURES AND 3) INSTALLATION AND MAINTENANCE OF PERMANENT SESC CONTROL MEASURES IF APPLICABLE. THE CONTRACTOR SHALL REVIEW THE SESC MEASURES IN ORDER TO PREPARE AND ISSUE FOR APPROVAL AN "SESC IMPLEMENTATION PLAN", WHICH INDICATES THE CONTRACTOR'S INTENDED IMPLEMENTATION OF THE SESC PLAN FOR THE PROJECT, INCLUDING A SCHEDULE.
5. THE CONTRACTOR SHALL INSTALL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES PRIOR TO OR UPON COMMENCEMENT TO EARTHWORK ACTIVITIES.
6. THE CONTRACTOR WILL PERFORM SWEEPING AS NEEDED TO REMOVE ANY SEDIMENT TRACKED OFF SITE. FREQUENCY OF SWEEPING WILL BE BASED ON SITE CONDITIONS.
7. THE CONTRACTOR WILL PERFORM DUST CONTROL AS NEEDED BASED ON SITE CONDITIONS.
8. DISTURBED AREAS THAT WILL REMAIN IDLE DURING CONSTRUCTION MUST BE TEMPORARILY STABILIZED, INCLUDING SOIL STOCKPILES.
9. THE CONTRACTOR SHALL MAINTAIN AND INSPECT SESC MEASURES THROUGHOUT THE COURSE OF THE PROJECT. AT A MINIMUM, THE CONTRACTOR SHALL INSPECT AND MAINTAIN SESC MEASURES ONCE A WEEK AND AFTER RAIN EVENTS.
10. THE CONTRACTOR SHALL CORRECT NON-CONFORMING SESC MEASURES WITHIN 24 HOURS, IF WATERS OF THE STATE ARE BEING IMPACTED OR WITHIN 48 HOURS FOR ROUTINE MAINTENANCE ITEMS. OTHER SESC MAINTENANCE SHALL BE COMPLETED AS SOON AS POSSIBLE BUT NEVER MORE THAN FIVE (5) DAYS AFTER DETECTION.
11. THE CONTRACTOR SHALL COMPLETE PERMANENT SOIL EROSION CONTROL MEASURES FOR ANY DISTURBED LAND AREA WITHIN 5 CALENDAR DAYS AFTER FINAL GRADING OR THE FINAL EARTH CHANGE HAS BEEN COMPLETED. THE CONTRACTOR SHALL MAINTAIN TEMPORARY CONTROL MEASURES UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IN PLACE AND THE AREA IS STABILIZED.
12. THE CONTRACTOR SHALL REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER PERMANENT SOIL EROSION MEASURES ARE IN PLACE AND THE AREA IS STABILIZED.
13. CONTRACTOR AND ENGINEER SHALL DISCUSS APPROPRIATE CONSTRUCTION ACCESS ROUTES DURING PRE-CONSTRUCTION MEETING. CONTRACTOR & ENGINEER SHALL MARK UP CONSTRUCTION PLAN AND AGREE TO CONSTRUCTION ACCESS ROUTES FOR ALL MATERIALS AND EQUIPMENT. CONTRACTOR SHALL NOTIFY ENGINEER PRIOR TO ANY DEVIATION FROM ROUTES.

LEGEND

- GRADING LIMITS
--- SILT FENCE
--- 100' EXISTING CONTOUR
[Pattern] PROPOSED GRASS AREAS
[Pattern] PROPOSED HMA PAVEMENT
[Pattern] PROPOSED RIPRAP



KNOW WHAT'S BELOW.
CALL BEFORE YOU DIG.

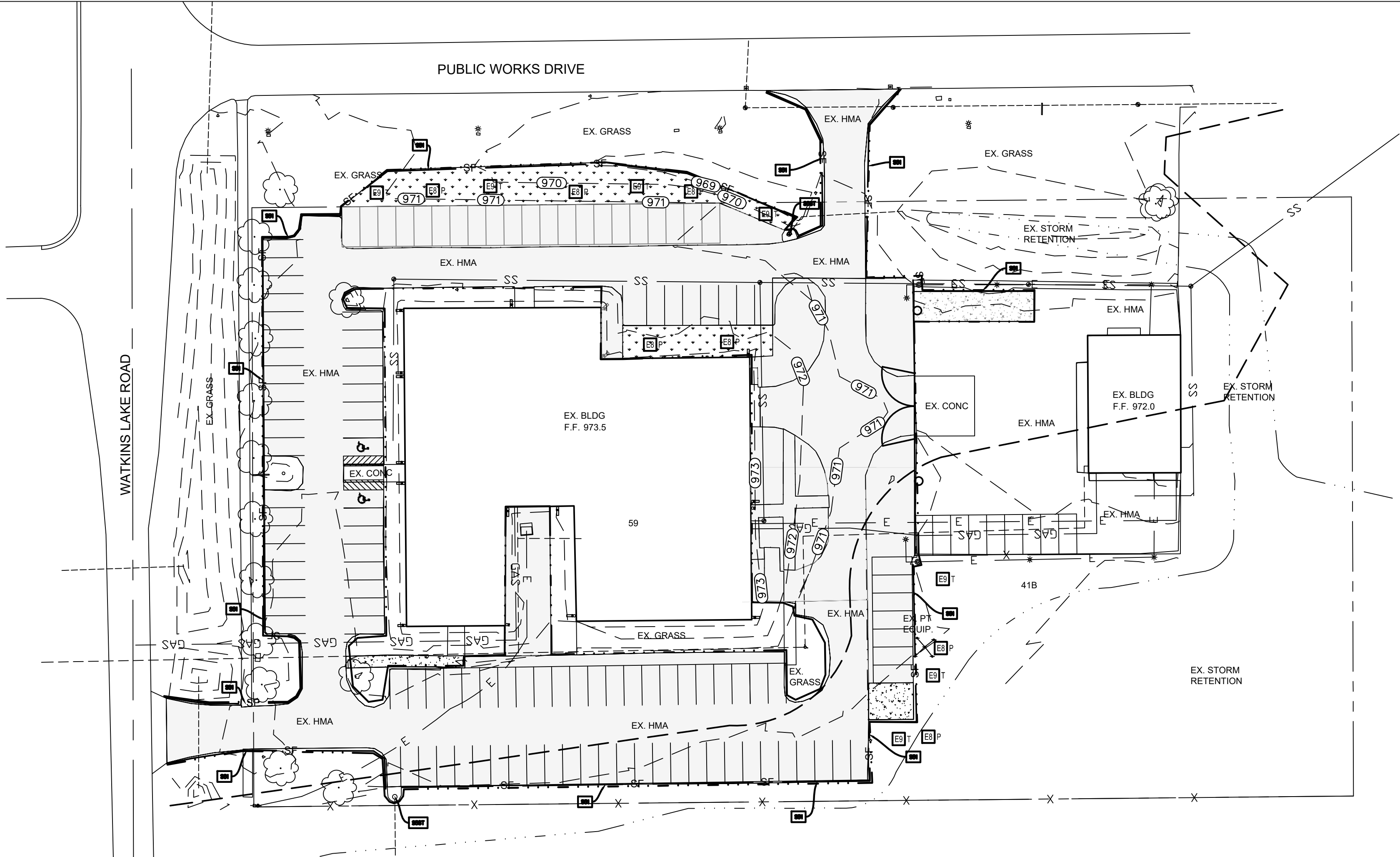
SOIL EROSION & SEDIMENTATION CONTROL OPERATION
TIME SCHEDULE FOR CONSTRUCTION PHASE 1

CONSTRUCTION SEQUENCE	OCT 2025	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
TEMPORARY EROSION CONTROL MEASURES												
TEMP. CONSTRUCTION ROADS												
STRIP & STOCKPILE TOPSOIL												
ROUGH GRADE SEDIMENT CONTROL												
STORM DRAINAGE REQUIREMENTS												
FINISH GRADING												
PERMANENT EROSION CONTROL MEASURES												

KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED	QUANTITY
EROSION CONTROLS				
E8	PERMANENT SEEDING	[Symbol]	Stabilization method utilized on sites where earth change has been completed (final grading attained). See specifications for requirements.	665 SYD
E9	MULCH BLANKETS	[Symbol]	On exposed slopes, newly seeded areas, new ditch bottoms, or areas subject to erosion.	390 SYD
E12	RIPRAP	[Symbol]	Use along shorelines, waterways, or where concentrated flows occur. Slows velocity, reduces sediment load, and reduces erosion.	NA
SEDIMENT CONTROLS				
S51	SILT FENCE	[Symbol]	Use adjacent to critical areas, to prevent sediment laden sheet flow from entering these areas.	1366'
S58	INLET PROTECTION FABRIC DROP	[Symbol]	Use at stormwater inlets, especially at construction sites.	2

E6T "T" NOTES TEMPORARY EROSION CONTROL MEASURE

E8P "P" NOTES PERMANENT EROSION CONTROL MEASURE



SESC PLAN
1" = 40'

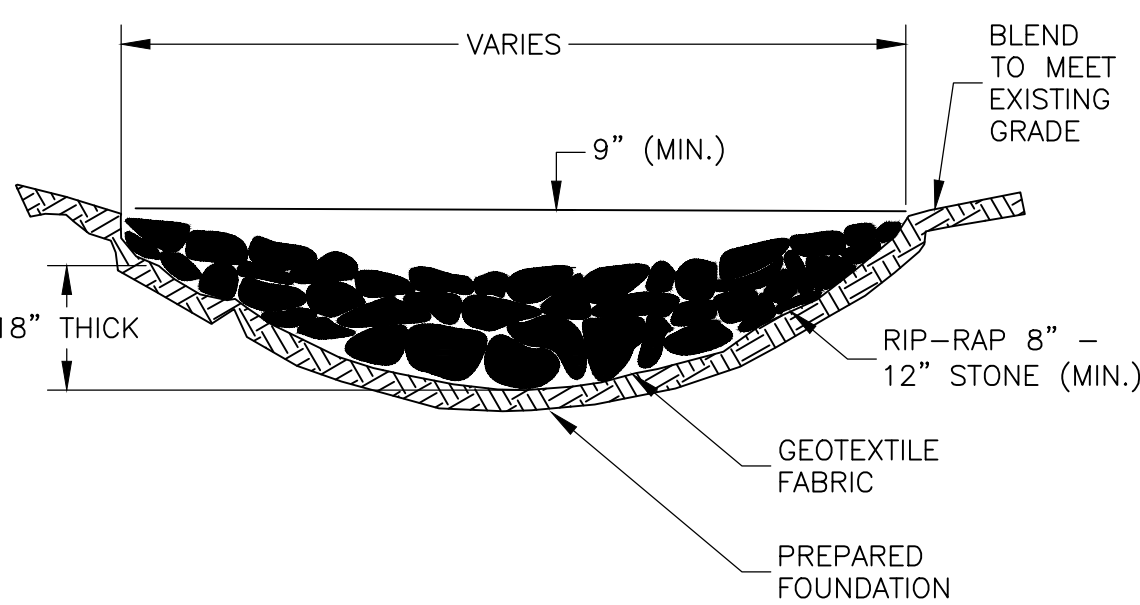
SOIL TYPES ARE ACCORDING TO THE USDA SOIL SURVEY WEB SITE.

41B - Aquepts, sandy, loamy, undulating.
59 - Urban land.

SOIL TYPE LIMIT

OWNED BY OAKLAND COUNTY. 20 YEAR LEASE. COUNTY HAS LAND DESCRIPTION

DISTURBANCE AREA .41 ACRES



E12 RIPRAP DETAIL

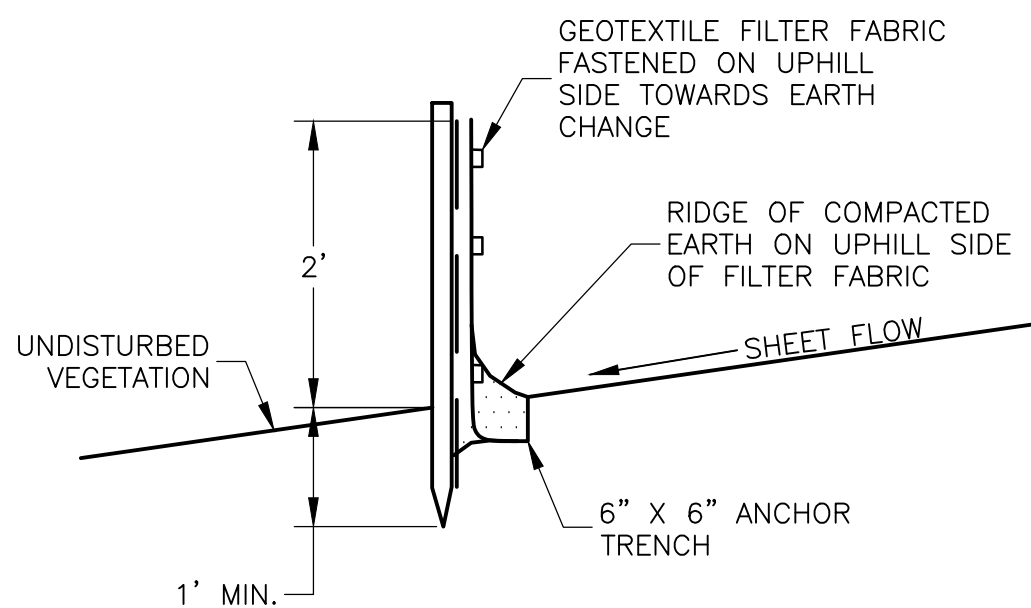
NOT TO SCALE

RIPRAP NOTES

- RIPRAP MIXTURE SHALL BE AN EVEN MIXTURE OF STONE SIZES BASED ON THE AVERAGE, OR D₅₀. THIS MEANS 50% OF THE STONE, BY SIZE, WILL BE LARGER THAN THE DIAMETER SPECIFIED, AND 50% WILL BE SMALLER THAN THE SIZE SPECIFIED. THE DIAMETER OF THE LARGEST STONE SHOULD NOT BE MORE THAN 1.5 TIMES THE D₅₀ STONE SIZE. THE D₅₀ SIZE SHALL BE 13 INCHES AS SHOWN BELOW.
- ROCK SHALL BE PLACED SO THAT LARGER ROCKS ARE UNIFORMLY DISTRIBUTED AND IN CONTACT WITH ONE ANOTHER. SMALLER ROCKS SHOULD FILL THE VOIDS.
- THE AREA UNDER REVIEW FOR RIPRAP PLACEMENT MUST BE SHAPED AND CONTOURED APPROPRIATELY BY GRADING PRIOR TO MATERIAL PLACEMENT.
- NON-WOVEN GEOTEXTILE FABRIC SHALL BE INSTALLED PRIOR TO RIPRAP PLACEMENT, WITH UPPER END AND TOE END OF FABRIC BURIED OR ANCHORED TO PREVENT MOVEMENT.
- RIPRAP PLACEMENT SHALL BE STARTED AT A STABILIZED LOCATION AND ENDED AT A STABILIZED OR CONTOURED POINT.
- MATERIAL SELECTED FOR RIPRAP SHALL BE HARD, ANGULAR, AND RESISTANT TO WEATHERING.

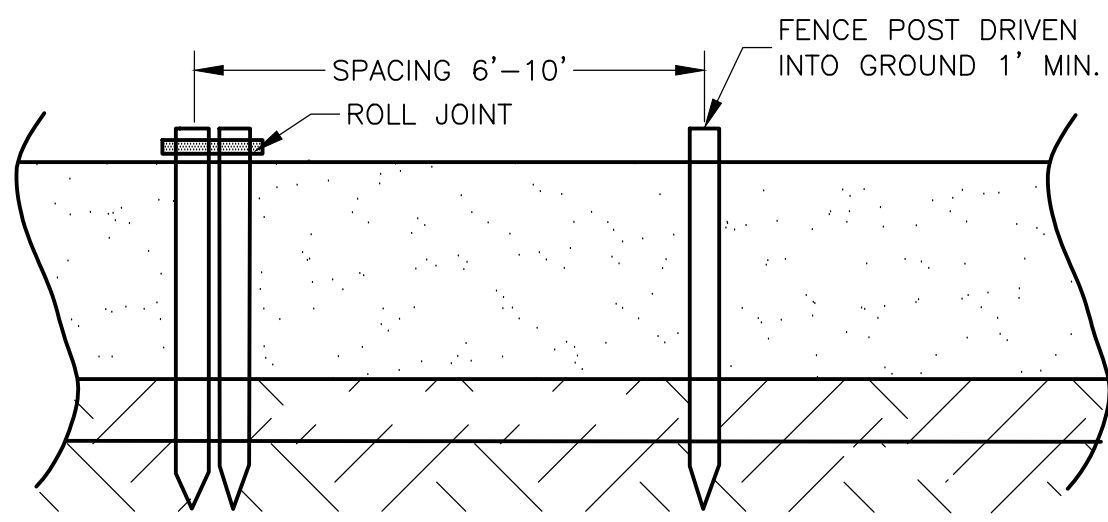
SIZE OF TYPICAL RIPRAP STONES

WEIGHT (LBS)	AVERAGE DIAMETER D50 (IN)	TYPICAL SHAPE LENGTH(IN)	WIDTH(IN)
100	13	21	7



S51 SILT FENCE

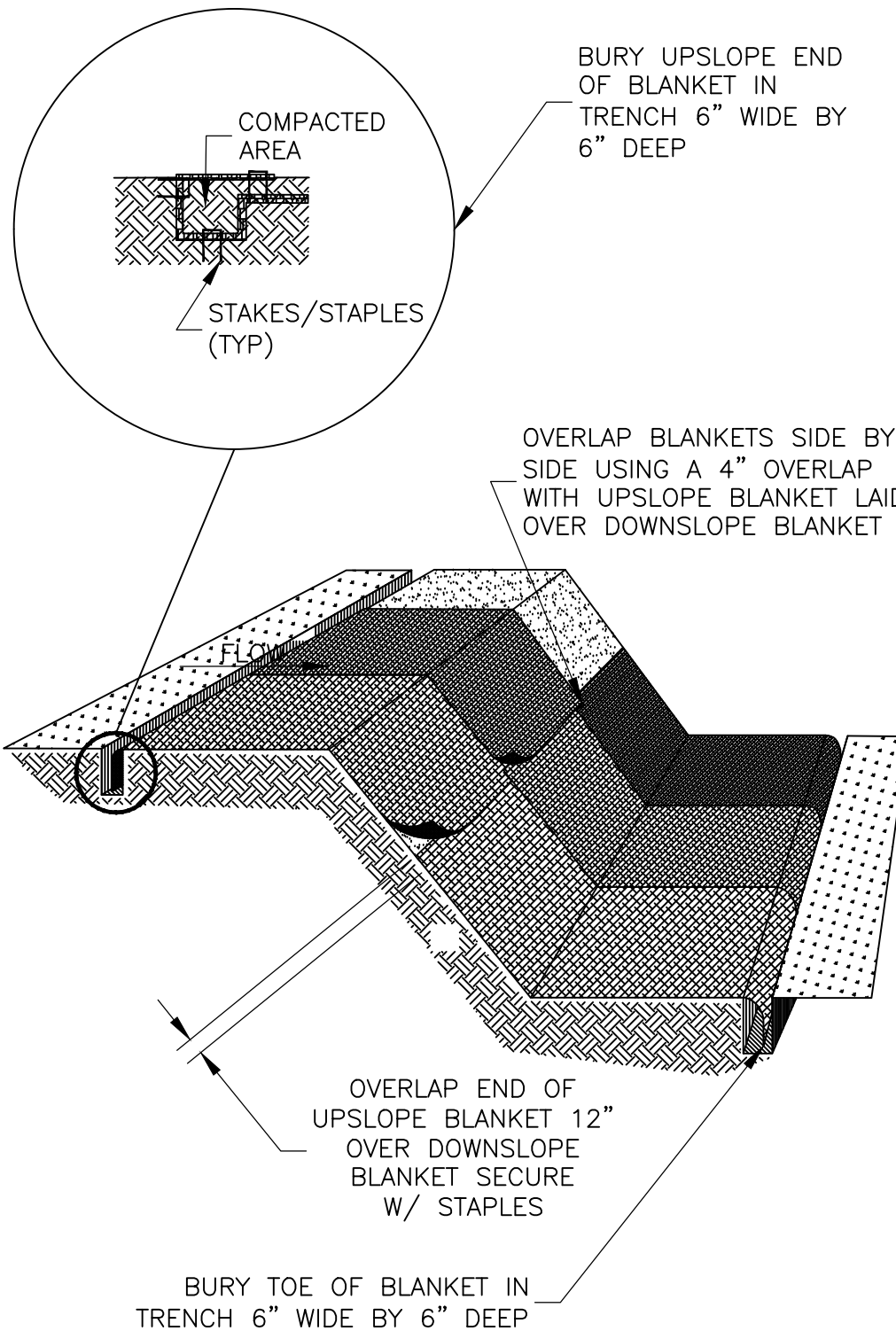
NOT TO SCALE



ROLL JOINTS

MULCH BLANKET NOTES

- PREPARE SUBGRADE TO PROPER GRADE AND COMPACTION REQUIREMENTS.
- REMOVE RUTS, ROOTS, SOIL CLODS, OR OTHER DEBRIS FROM SURFACE SUBJECT TO MULCH BLANKET INSTALLATION.
- SPREAD SEED.
- PLACE MULCH BLANKET PARALLEL TO FLOW AND ANCHOR SECURELY.
- WHEN BLANKETS ARE USED IN FLOWING DITCH, BLANKETS SHOULD NOT OVERLAP IN DITCH CENTER PARALLEL TO FLOW.
- STAPLES INSTALLED/SECURED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
- INSTALL BLANKET AT TOP OF SLOPE. FIRST ANCHORING TOE IN TRENCH 6" WIDE X 6" DEEP. PROGRESSING DOWN-SLOPE OR DOWN-GRADIENT WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH.
- APPLY SEED TO COMPACTED SOIL AND FOLD THE 12" PORTION OF THE BLANKET OVER COMPACTED AREA AND SECURE WITH A ROW OF STAPLES/STAKES PLACED 12" APART ACROSS THE WIDTH OF THE BLANKET.
- UNROLL THE BLANKETS DOWN OR HORIZONTALLY ACROSS THE SLOPE.
- OVERLAP BLANKET EDGES BY A MINIMUM OF 4" AND BLANKET ENDS BY A MINIMUM OF 12". OVERLAPS SHOULD BE IN THE DIRECTION OF EXPECTED FLOW WITH THE UP-SLOPE BLANKET PLACED OVER THE DOWN-SLOPE BLANKET EDGE.
- SECURE DOWN-SLOPE END OF BLANKET WITH STAPLES/STAKES AND TRENCH IN.
- CHECK AFTER A RAIN EVENT TO ENSURE THE BLANKET IS STILL IN PLACE.
- KEEP ERODED SOIL, VEHICULAR AND PEDESTRIAN TRAFFIC, AND CONCENTRATED RUNOFF AWAY FROM THE BLANKETED AREA.

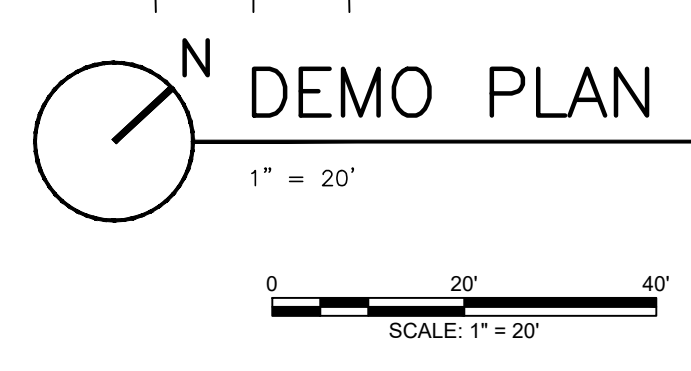
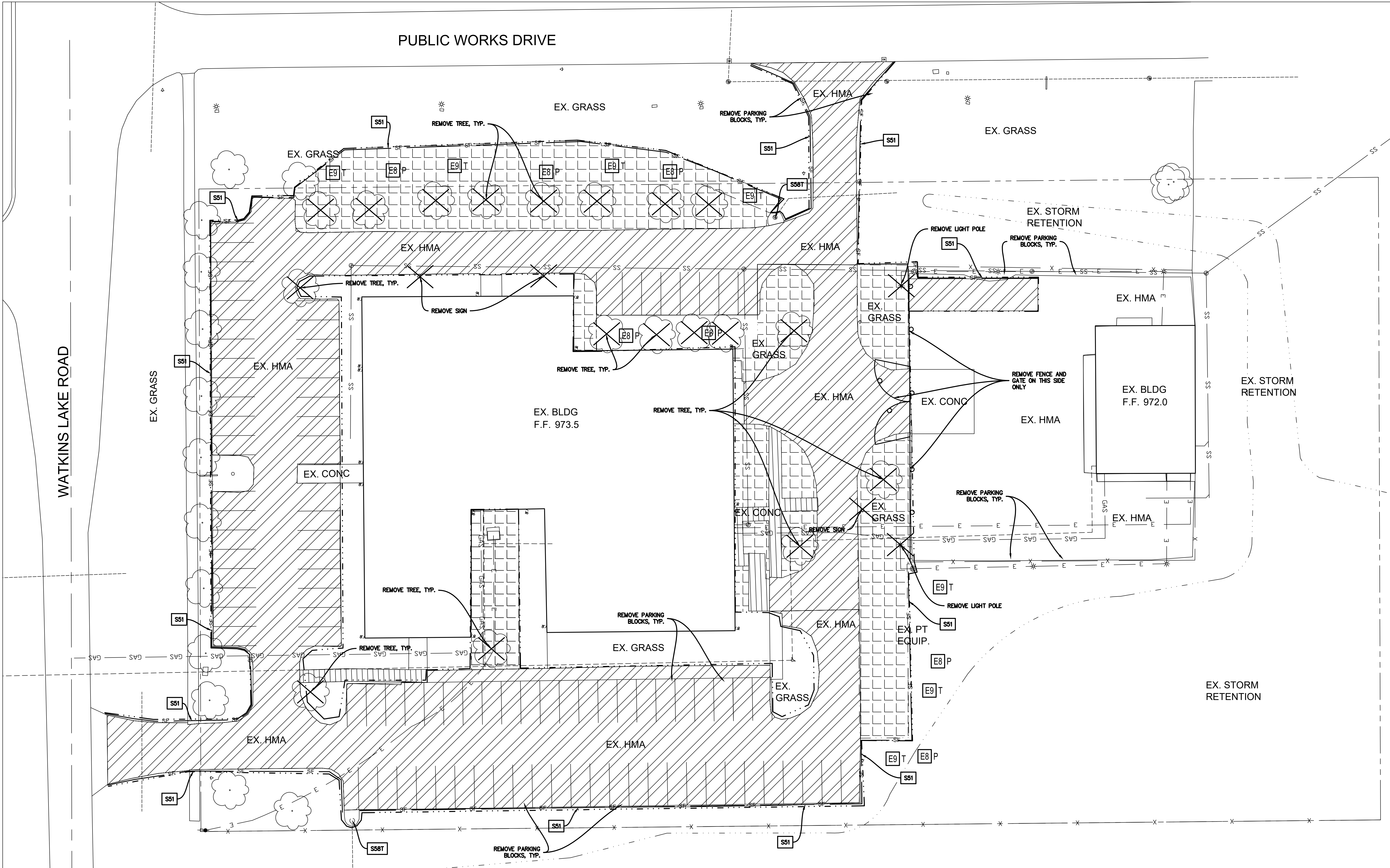


E9 MULCH BLANKET

NOT TO SCALE

SILT FENCE NOTES

- INSTALL PARALLEL TO A CONTOUR.
- SILT FENCE SHALL BE MADE OF WOVEN GEOTEXTILE FABRIC.
- DIG A 6" TRENCH ALONG THE AREA WHERE THE FENCE IS TO BE INSTALLED.
- PLACE 6" OF THE SILT FENCE BOTTOM FLAP INTO THE TRENCH. BACKFILL THE TRENCH WITH SOIL AND COMPACT THE SOIL ON BOTH SIDES. CREATE A SMALL RIDGE ON THE UP-SLOPE SIDE OF THE FENCE.
- INSTALL WOODEN STAKES 6 - 10' APART AND DRIVE INTO THE GROUND A MINIMUM OF 12".
- STAPLE THE GEOTEXTILE FABRIC TO THE WOODEN STAKES.
- JOIN SECTIONS OF SILT FENCE BY WRAPPING ENDS TOGETHER (SEE DRAWING).
- INSPECT FREQUENTLY AND IMMEDIATELY AFTER EACH STORM EVENT. CHECK SEVERAL TIMES DURING PROLONGED STORM EVENTS. IF NECESSARY, REPAIR IMMEDIATELY.
- IF THE SEDIMENT HAS REACHED 1/3 THE HEIGHT OF THE FENCE, THE SOIL SHALL BE REMOVED AND DISPOSED OF IN A STABLE UPLAND SITE.
- THE FENCE SHALL BE RE-INSTALLED IF WATER IS SEEPING UNDERNEATH IT OR IF THE FENCE HAS BECOME INEFFECTIVE.
- SILT FENCE SHALL BE REMOVED ONCE VEGETATION IS ESTABLISHED AND UP-SLOPE AREA HAS STABILIZED.

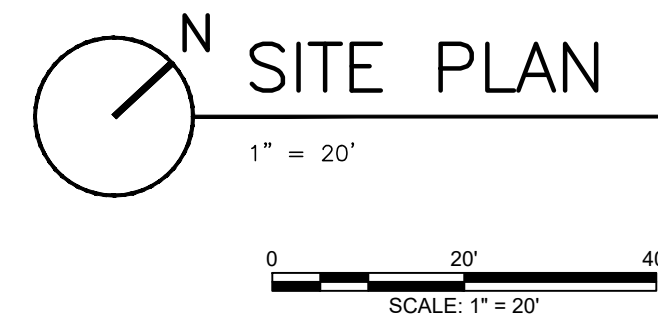
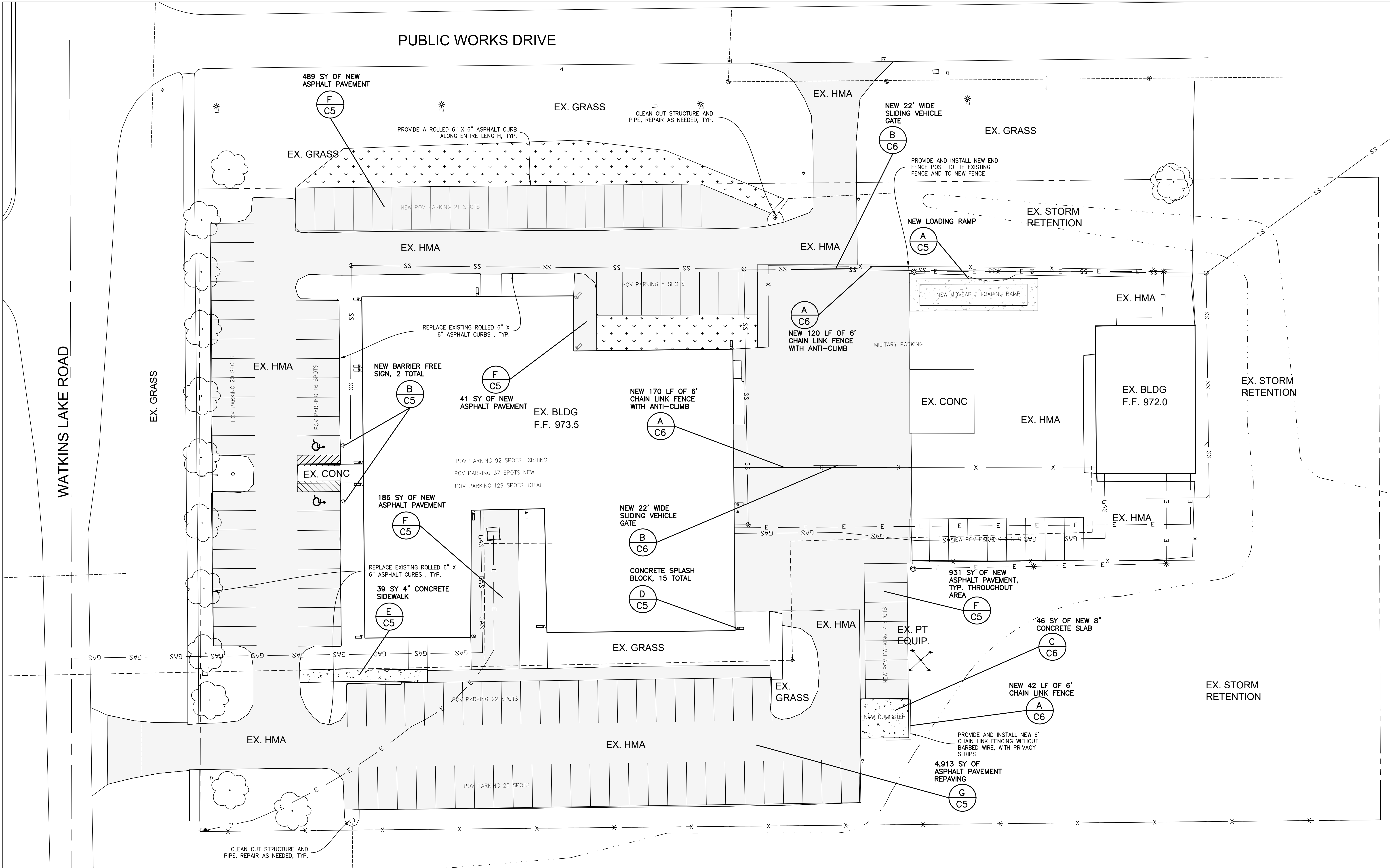


LEGEND

- | | |
|--------------------------------|---|
|
EXISTING FENCE |
GRADING LIMITS |
|
PROPERTY LINE |
SILT FENCE, 1386' TOTAL |
|
STORM DETENTION AREA |
EXISTING CONTOUR |
|
UNDERGROUND ELECTRIC LINE |
REMOVE CHAIN LINK FENCE, 138' TOTAL |
|
UNDERGROUND GAS LINE |
EXISTING SIGN |
|
UNDERGROUND WATER LINE |
EXISTING LIGHT |
|
UNDERGROUND SANITARY SEWER | |
|
UNDERGROUND STORM SEWER | |
-
- | | |
|---|--|
|
CLEAR AND GRUB, REMOVE TOPSOIL, STOCKPILE. GRADE FOR NEW PAVEMENT CROSS SECTION - 1940 SY |
MILL AND PULVERIZE ENTIRE DEPTH OF ASPHALT INCLUDING CURB, USE FOR FILL IF NEEDED AND REGRADE OF NEW LOT - 4913 SY TOTAL |
|
DEMOLISH AND REMOVE CONCRETE - 145 SY TOTAL | |
- * SOME AREAS HAVE MULTIPLE AREA TYPES FOR WORK

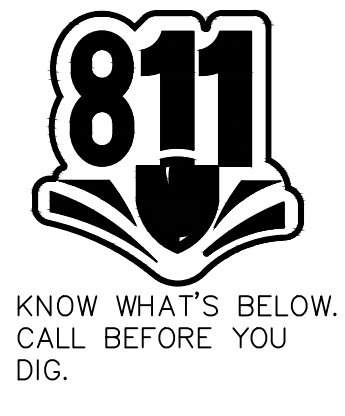
NOTE:
REMOVE 25 CONCRETE JERSEY BARRIERS LOCATED THROUGHOUT THE SITE.





LEGEND

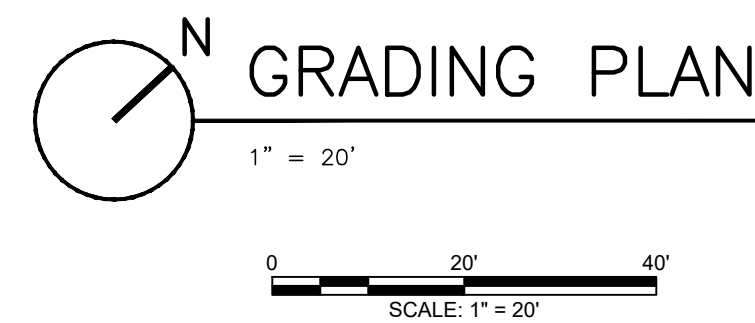
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|--|--------------------------------------|--|------------------------------|--|--|
| | PROPOSED GRASS AREAS, 665 SY TOTAL | | PROPOSED FENCE, 332 LF TOTAL | | PROPOSED SIGN, 2 TOTAL |
| | PROPOSED HMA PAVEMENT, 6550 SY TOTAL | | EXISTING FENCE | | PROPOSED EXT. LIGHT WITH POLE, 2 TOTAL |
| | PROPOSED CONCRETE, 245 SY TOTAL | | PROPERTY LINE | | CONTROL POINT |
| | | | STORM DETENTION AREA | | DETAIL # 1/5 |
| | | | UNDERGROUND ELECTRIC LINE | | SHEET SHOWN |
| | | | UNDERGROUND GAS LINE | | |
| | | | UNDERGROUND WATER LINE | | |
| | | | UNDERGROUND SANITARY SEWER | | |
| | | | UNDERGROUND STORM SEWER | | |



STATE OF MICHIGAN DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET PROCUREMENT AND REAL ESTATE SERVICES ADMINISTRATION DESIGN AND CONSTRUCTION DIVISION ADAM LACH, P.E., DIRECTOR	RENOVATE ARMORY - WATERFORD DEPARTMENT OF MILITARY AND VETERANS AFFAIRS 2650 WATKINS LAKE RD., WATERFORD TWP, MI 48328	
	DESIGNED DRAWN CHECKED APPROVED	KMM KMM BAB
DATE 23 JAN 2025	ISSUED FOR PRELIMINARY CONSTRUCTION FINAL RECORD	
IDENTIFICATION NO.	PROJECT 260023043 INDEX CODE	
SHEET SITE PLAN	C3	

WATKINS LAKE ROAD

PUBLIC WORKS DRIVE



LEGEND

- | | | | |
|--|--------------------------------------|--|------------------------------|
| | PROPOSED GRASS AREAS, 665 SY TOTAL | | PROPOSED FENCE, 332 LF TOTAL |
| | PROPOSED HMA PAVEMENT, 6550 SY TOTAL | | EXISTING FENCE |
| | PROPOSED CONCRETE, 245 SY TOTAL | | PROPERTY LINE |
| | | | STORM DETENTION AREA |
| | | | UNDERGROUND ELECTRIC LINE |
| | | | UNDERGROUND GAS LINE |
| | | | UNDERGROUND WATER LINE |
| | | | UNDERGROUND SANITARY SEWER |
| | | | UNDERGROUND STORM SEWER |
| | | | EXISTING CONTOUR |

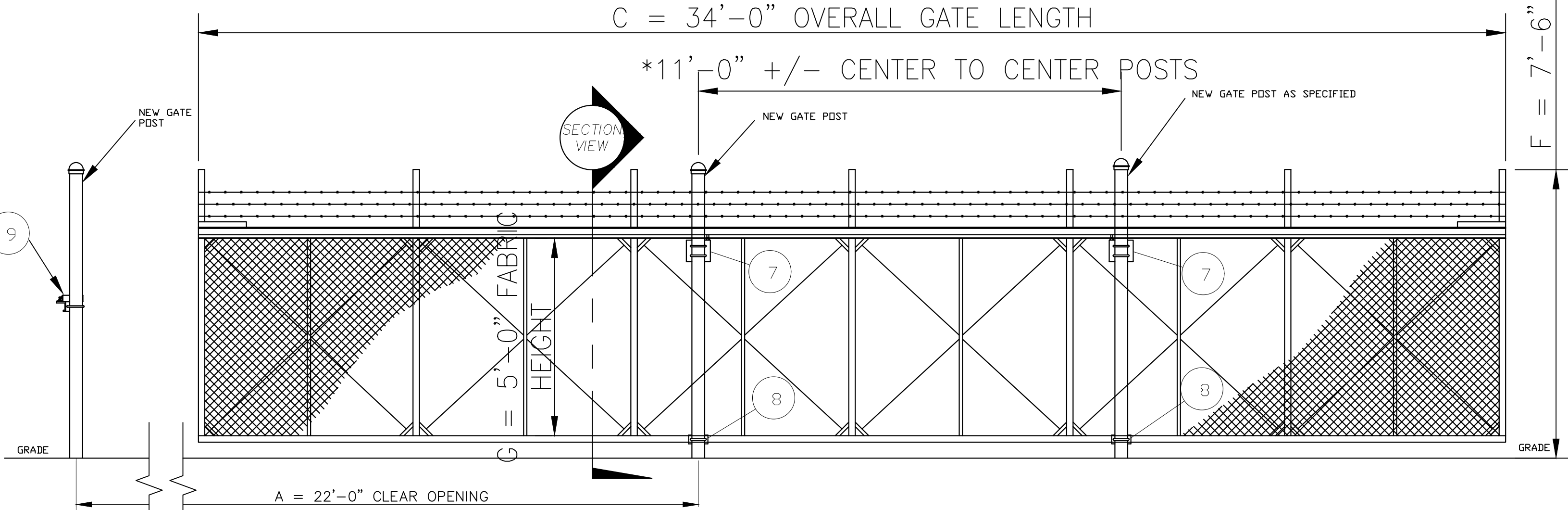
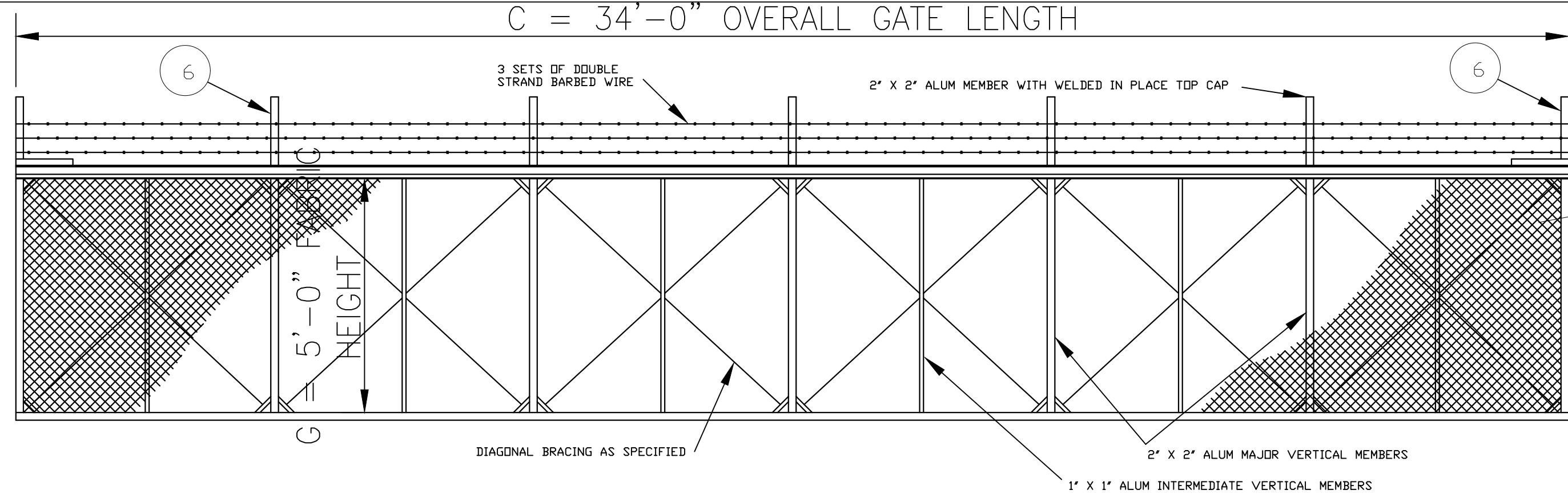
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|--|--|
| | PROPOSED SIGN, 2 TOTAL |
| | PROPOSED EXT. LIGHT WITH POLE, 2 TOTAL |
| | CONTROL POINT |
| | DETAIL # 1/5 |
| | SHEET SHOWN |

- | | |
|--|-------------------------|
| | GRADING LIMITS |
| | SILT FENCE, 1366' TOTAL |
| | PROPOSED CONTOUR |
| | EXISTING CONTOUR |



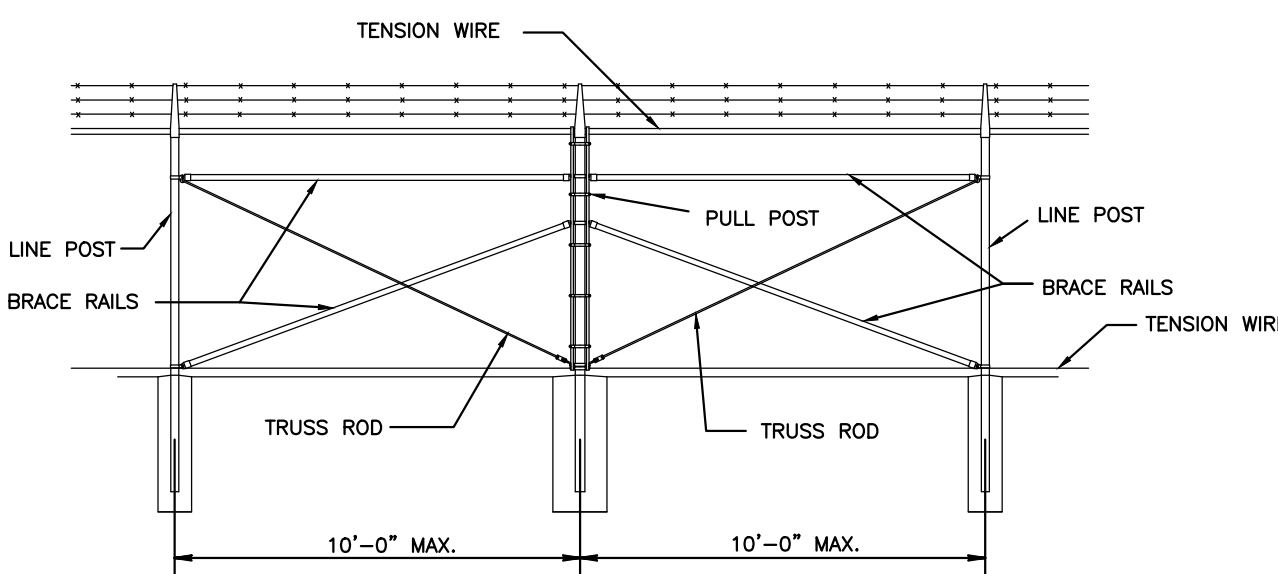
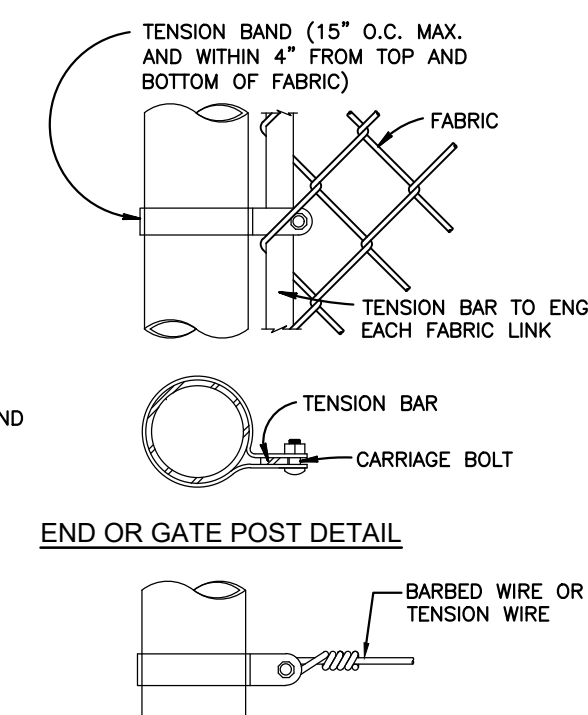
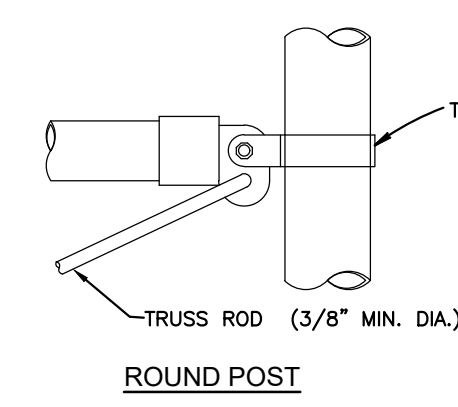
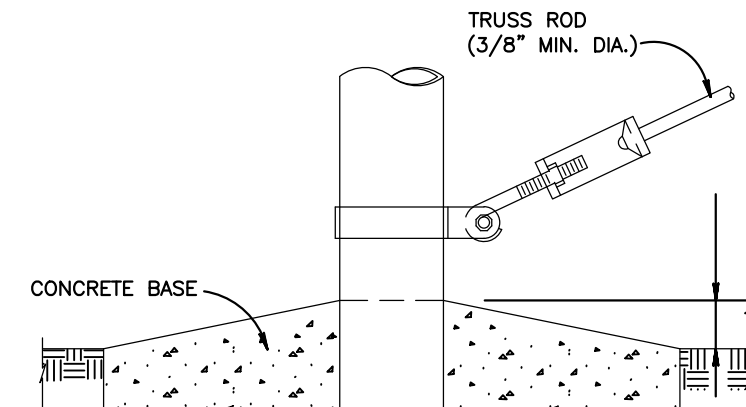
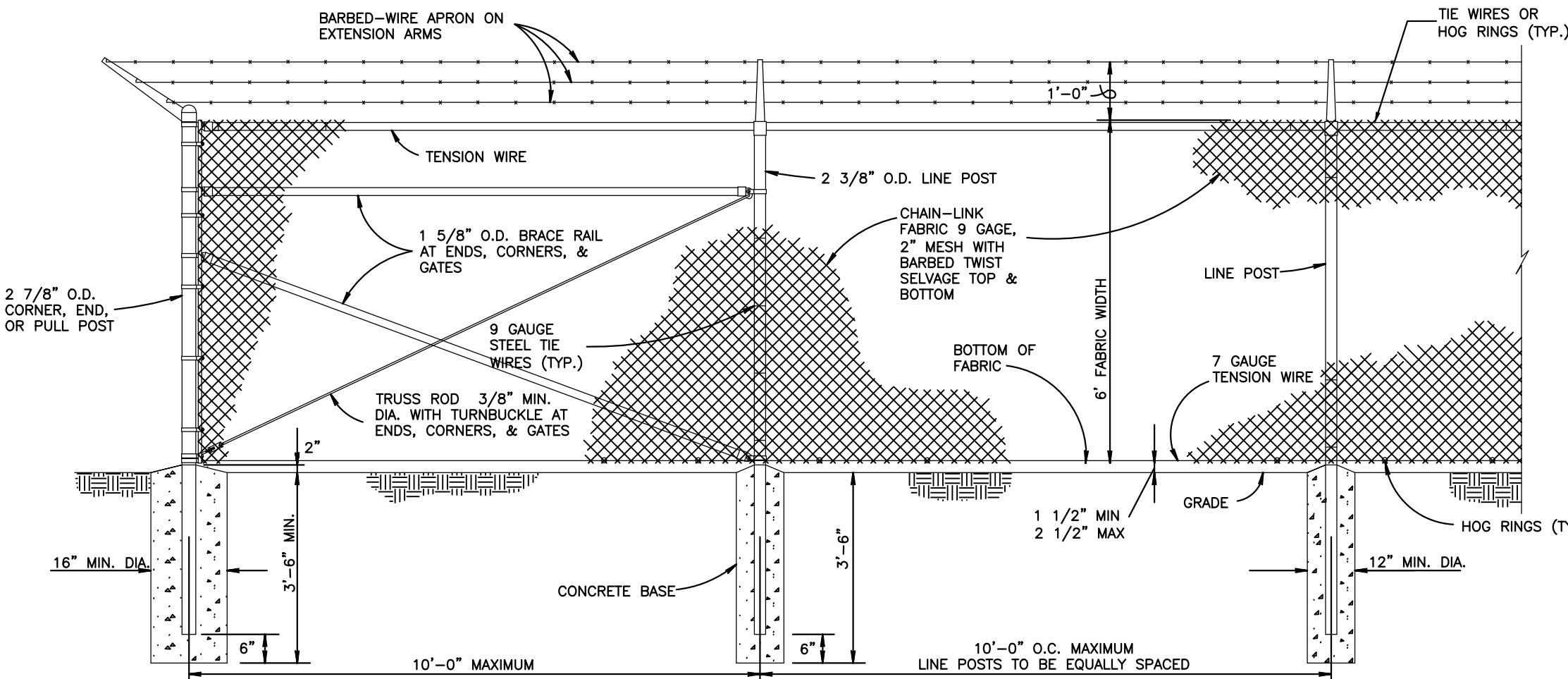
KNOW WHAT'S BELOW.
CALL BEFORE YOU
DIG.



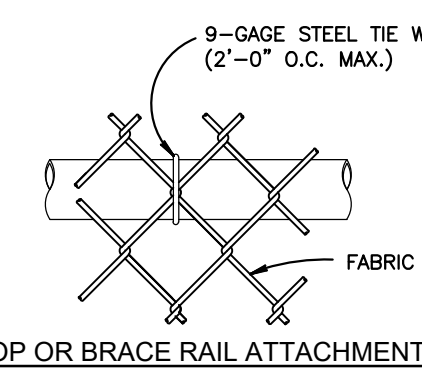
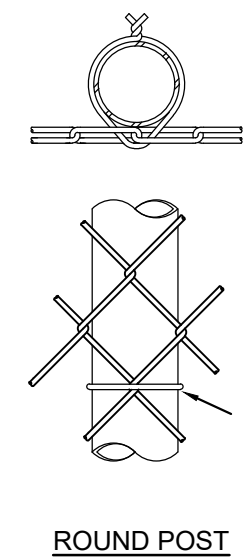


B NEW 22' ALUMINUM SLIDING GATE

NOT TO SCALE



NOTE: PROVIDE BRACE PANEL WHENEVER STRAIGHT RUNS EXCEED 660 FEET.



A 6' SECURITY FENCE DETAIL

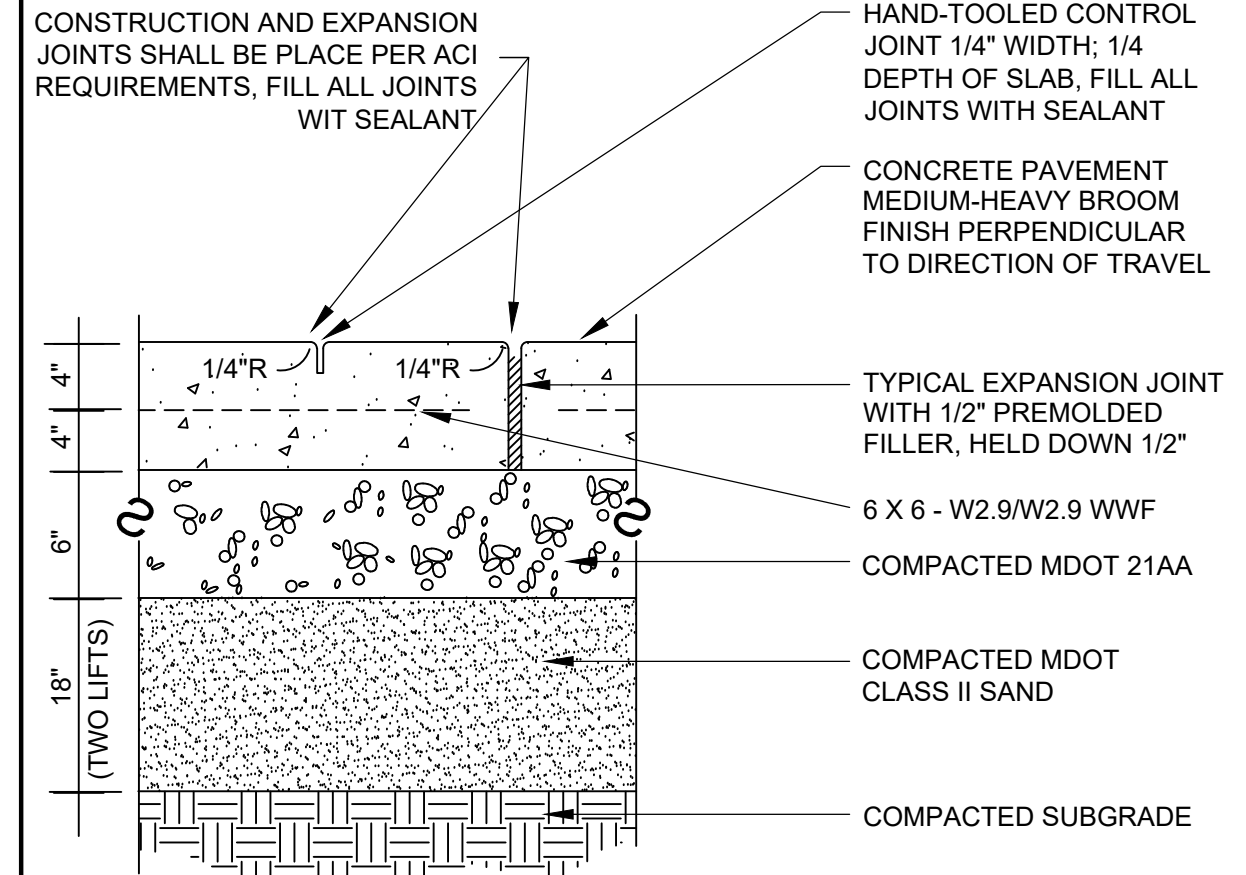
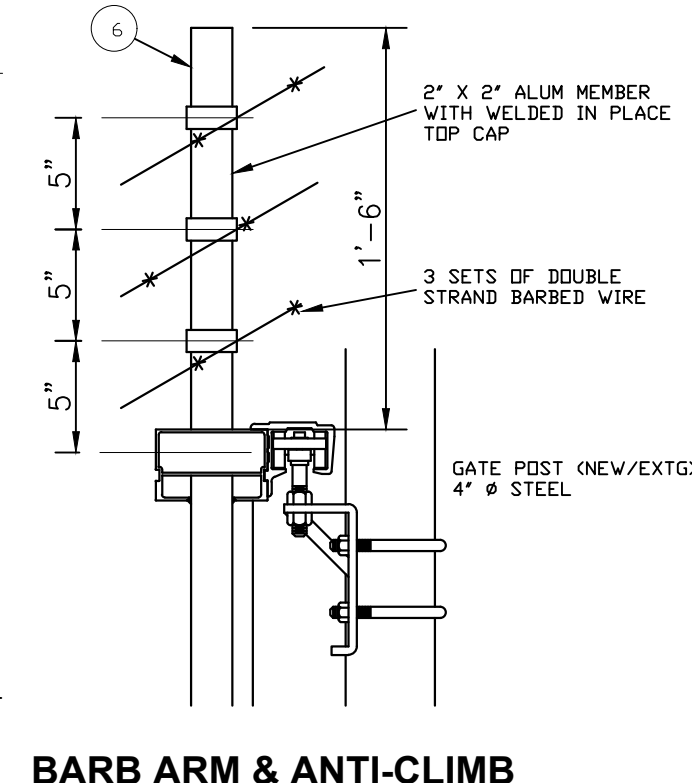
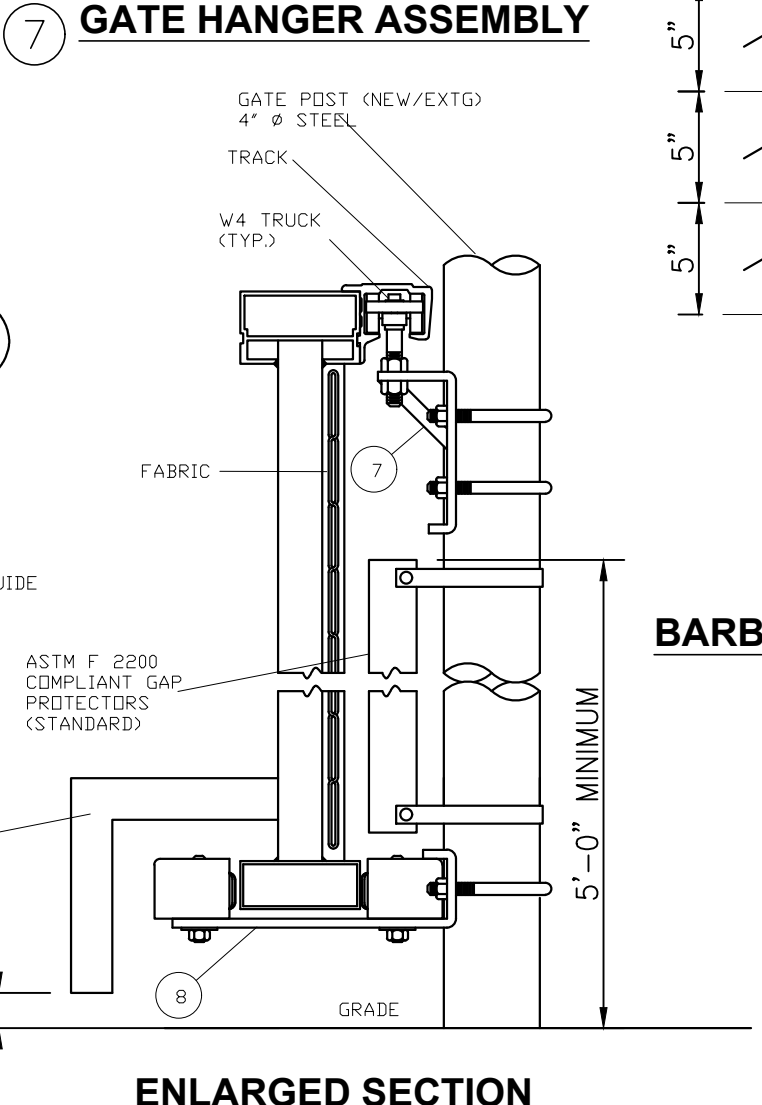
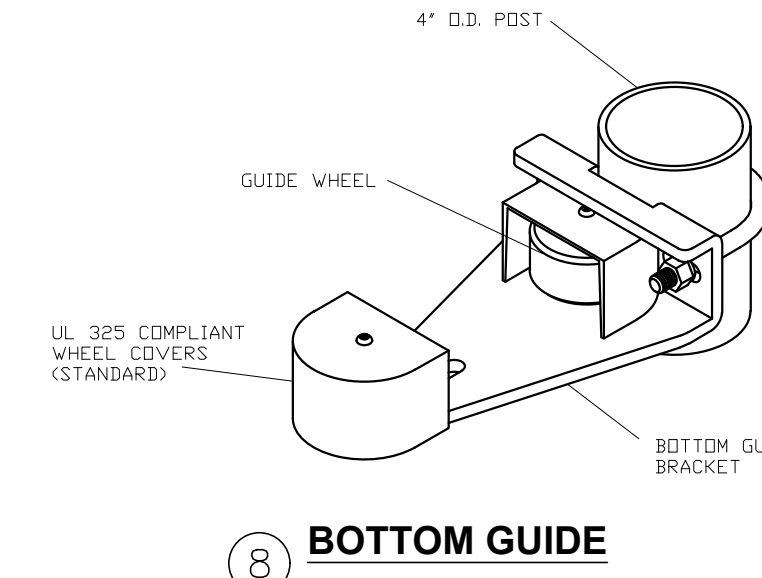
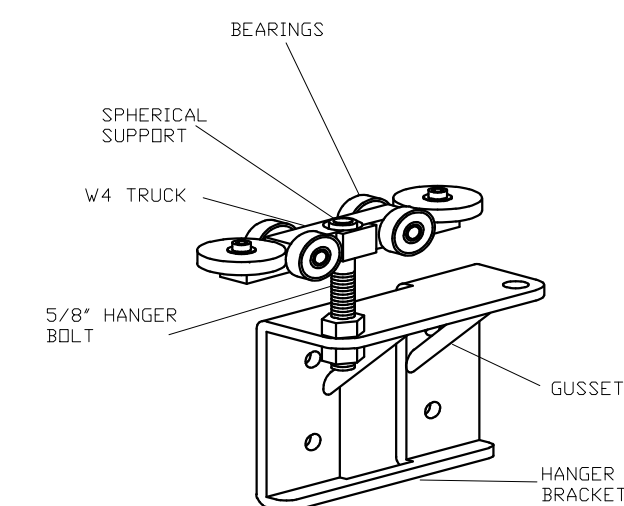
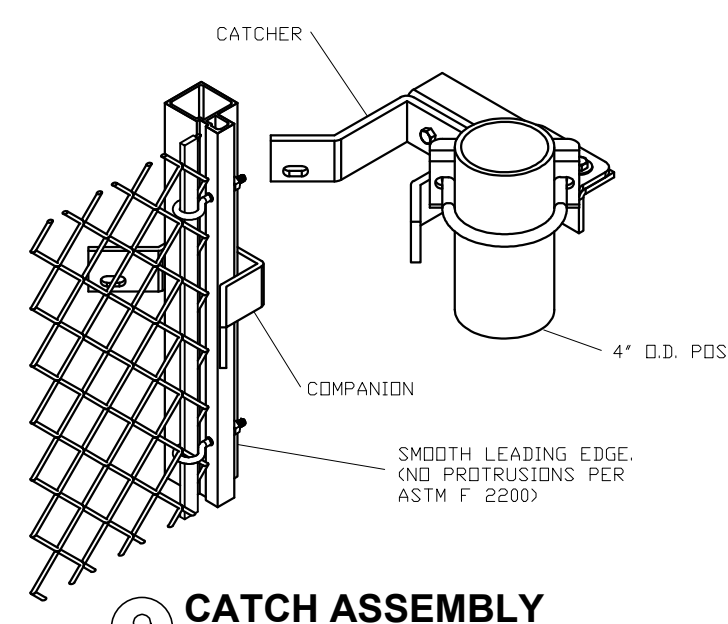
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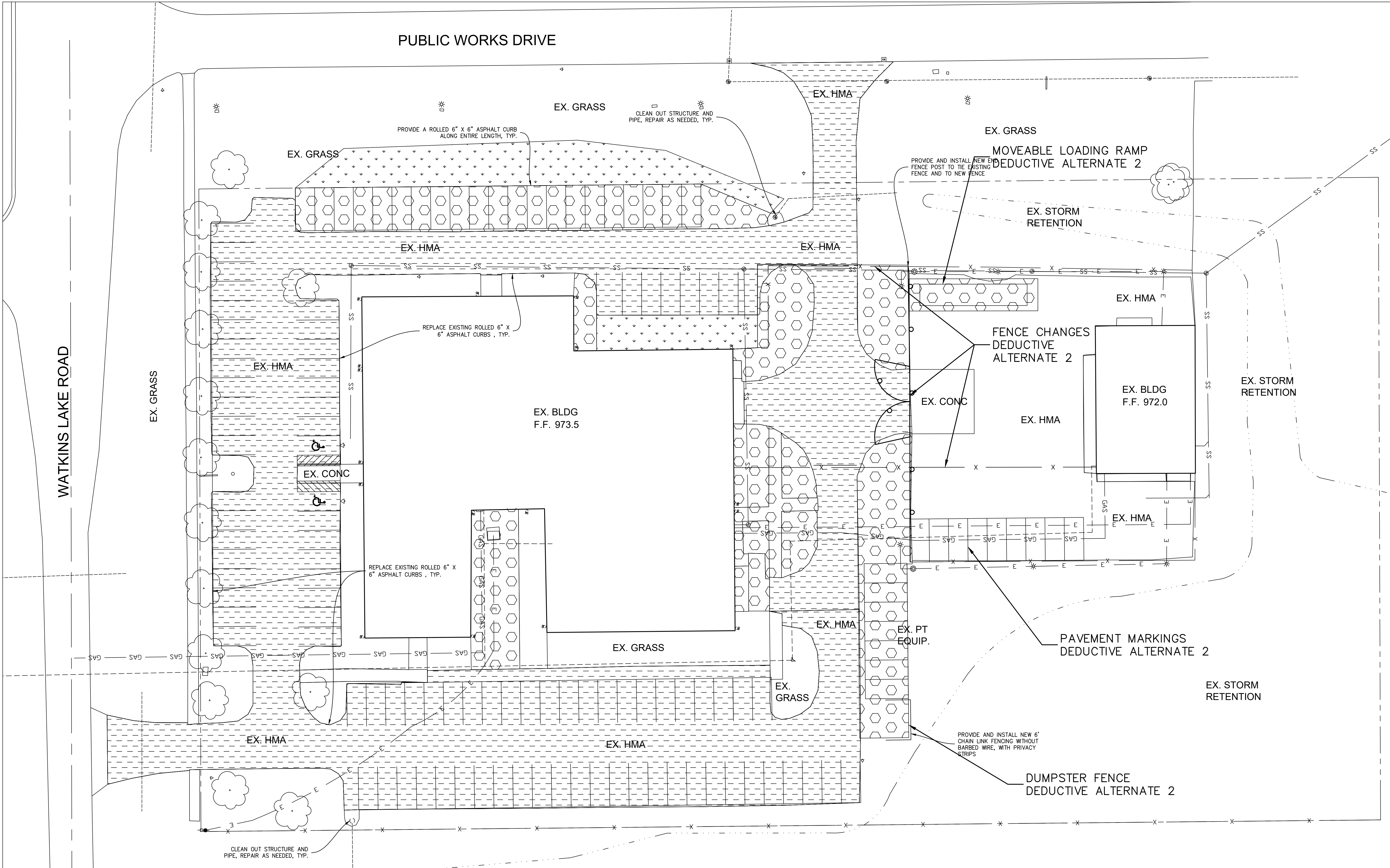
** THE CONTRACTOR SHALL INSTALL GSA PERIMETER SIGNS PROVIDED BY DWA FOR ALL NEW FENCING AND GATES. THE CONTRACTOR SHALL INSTALL SIGNS ON THE SECURE SIDE OF THE FENCING WITH NOMENCLATURE SHOWN TO THE ROAD SIDE OF THE FENCING. THE SIGNS SHALL BE POSTED AT INTERVALS OF NO MORE THAN 100 FEET AND ON ALL NEW GATES. FASTEN WITH HOG RINGS ON 4 CORNERS.



GSA SAFETY SIGN NONREFLECTORIZED SIGN INCLUDES A RED, WHITE AND BLUE SHIELD ON A CREAM BACKGROUND GSA NUMBER 9905-00-559-2971

GATE CRITICAL DIMENSION CHART			
MARK	DESCRIPTION	FORMULA	DIM.
A	CLEAR OPENING	A	22'-0"
*B	COUNTERBALANCE POST SPACING C/C	(A/2)-11"	-
C	OVERALL GATE LENGTH	A x 1.5	34'-0"
*D	COUNTERBALANCE LENGTH	A x 0.5	-
E	NOMINAL GATE HEIGHT	E	6'-0"
F	POST HEIGHT (W BARB ARMS)	E + 1'-6"	7'-6"
G	FABRIC HEIGHT	E - 1'-0"	5'-0"





N

ALTERNATE PLAN

1" = 20'

020'40'

SCALE: 1" = 20'

ALTERNATE SCHEDULE	
1. STATE THE AMOUNT TO BE DEDUCTED FROM THE BASE PROPOSAL SUM TO REMOVE THE MATERIAL/LABOR AND PARTS/PIECES ASSOCIATED WITH MILLING AND PAVING OF THE EXISTING PAVING AS SHOWN ON SHEET C7.	
2. STATE THE AMOUNT TO BE DEDUCTED FROM THE BASE PROPOSAL SUM TO REMOVE THE MATERIAL/LABOR AND PARTS/PIECES ASSOCIATED WITH ALL OF THE REMAINING EXTERIOR WORK AS SHOWN ON SHEET C11.	

811

KNOW WHAT'S BELOW.
CALL BEFORE YOU DIG.