

CIVIL LEGEND

EXISTING	DESCRIPTION	PROPOSED
SD _x	STORM SEWER	
PW	PROCESS WASTE	
OW	OIL WASTE	
SS _x	SANITARY SEWER	
FM	SANITARY SEWER FORCE MAIN	
W _x	WATER MAIN	
F	FIRE WATER MAIN	
EU _x	UNDERGROUND ELEC. DUCT BANK	
E _x	OVERHEAD ELEC. WIRES	
S	UNDERGROUND STEAM PIPE	
C	UNDERGROUND CONDENSATE PIPE	
HWS	HEATING WATER SUPPLY	
HWR	HEATING WATER RETURN	
LP	UNDERGROUND LIQUID PROPANE PIPE	LP
PV	UNDERGROUND PROPANE VAPOR PIPE	PV
CO ₂	UNDERGROUND CARBON DIOXIDE PIPE	
CO ₂ -R	UNDERGROUND CARBON DIOXIDE RETURN PIPE	
CU _x	UNDERGROUND TELEPHONE LINE	
	SILT FENCE	SF
	TREE PROTECTION	TP
	UNDERGROUND UTILITY REMOVAL	
	ASPHALT PAVEMENT DEMO	
	CONCRETE PAVEMENT DEMO	
	AGGREGATE DEMO	
	ASPHALT PAVEMENT	
	CONCRETE PAVEMENT	
	AGGREGATE PAVEMENT	
	DECIDUOUS TREE	
	DECIDUOUS SHRUB	
	CONIFEROUS TREE OR SHRUB	
	LANDSCAPE BOULDER 6 TO 8 CUBIC FEET	
	LIMITS OF DISTURBANCE	
	INLET PROTECTION	

CIVIL ABBREVIATIONS

@	ASPH	ASPHALT
	CONC	CONCRETE
	COR	CONTRACTING OFFICER'S REPRESENTATIVE
	ELEC	ELECTRIC
	EQUIP	EQUIPMENT
(ES)		EMERGENCY SHUTOFF VALVE
EX		EXISTING
LOD		LIMITS OF DISTURBANCE
LP		LIQUID PROPANE
MECH		MECHANICAL
MH		MANHOLE
NTS		NOT TO SCALE
PC		PORTLAND CEMENT
PIV		POST INDICATOR VALVE
PV		PROPANE VAPOR
SF		SILT FENCE
TP		TREE PROTECTION
TYP.		TYPICAL

CIVIL NOTES

- DIG TEST PITS AT ALL UTILITY TIE IN LOCATIONS AND EXISTING UTILITY CROSSINGS TO VERIFY EXISTING INVERT INFORMATION, PIPE SIZES, AND MATERIALS. IF FINDINGS DIFFER FROM WHAT IS SHOWN ON PLANS, NOTIFY THE CONTRACTING OFFICER REPRESENTATIVE IMMEDIATELY, PRIOR TO ANY CONSTRUCTION.
- PROVIDE NECESSARY ADAPTERS TO TRANSITION FROM DIFFERENT PIPE SIZES AND MATERIALS SHOWN ON PLUMBING AND SITE PROPANE PLANS TO PIPE SIZES AND MATERIALS SHOWN ON THE SITE UTILITY PLANS.
- REROUTE AND RELOCATE ANY EXISTING UTILITIES IMPACTED BY CONSTRUCTION AS NECESSARY TO MAINTAIN PROPER COVER AND SERVICE OF EXISTING UTILITIES AFTER FINAL GRADING.
- ENSURE THAT POSITIVE DRAINAGE IS MAINTAINED AWAY FROM ALL BUILDINGS, CONCRETE PADS, AND EQUIPMENT.
- ALL FEATURES ARE PERPENDICULAR TO ONE ANOTHER, UNLESS NOTED OTHERWISE.
- A SINGLE, ON-SITE CONSTRUCTION BENCHMARK SHALL BE ESTABLISHED AND MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION. RELOCATION OF THE CONSTRUCTION BENCHMARK SHALL NOT BE PERMITTED.
- PRIOR TO CONSTRUCTION, FLAG THE CONSTRUCTION LIMITS AND HOLD A PRE-CONSTRUCTION MEETING WITH THE CONTRACTING OFFICER.
- ENSURE CONSTRUCTION ACTIVITIES DO NOT IMPACT ANY INSTALLATION OPERATIONS.
- RESTORE ALL DISTURBED AREAS TO MEET OR EXCEED EXISTING CONDITIONS, UNLESS NOTED OTHERWISE.
- ALL LAND WHICH IS DISTURBED BY THIS DEVELOPMENT, AND WHICH IS NOT BUILT UPON OR SURFACED, SHALL BE ADEQUATELY STABILIZED WITH PERMANENT VEGETATION TO CONTROL EROSION AND SEDIMENTATION IN CONFORMANCE WITH LOCAL JURISDICTIONAL REQUIREMENTS.

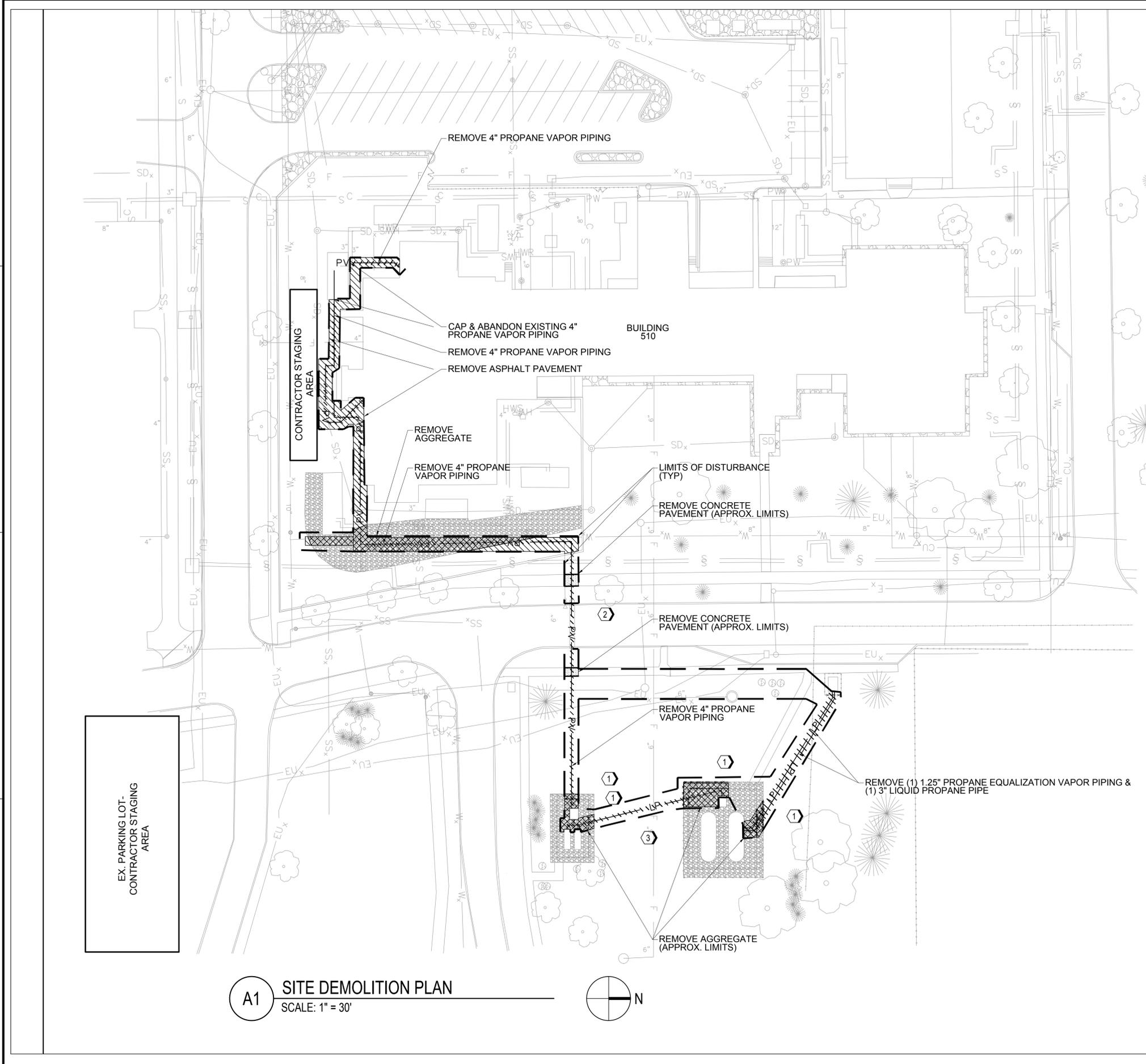
SURVEY NOTES

- EXISTING CONDITIONS INFORMATION IS BASED ON RECORD AS-BUILT MAPPING PROVIDED BY NAVFAC, DATED JUNE 1998.
- FIELD VERIFY EXISTING CONDITIONS INFORMATION PRIOR TO THE START OF CONSTRUCTION TO DETERMINE THE EXACT LOCATION OF ALL EXISTING STRUCTURES AND UTILITIES WITHIN THE LIMITS OF DISTURBANCE. ENGAGE A UTILITY LOCATOR SERVICE TO LOCATE AND MARK ALL EXISTING UTILITIES WITHIN THE LIMITS OF DISTURBANCE. NOTIFY CONTRACTING OFFICE'S REPRESENTATIVE IF CONDITIONS DIFFER. DO NOT PROCEED WITH ANY SITE WORK UNTIL THE CONDITIONS HAVE BEEN EVALUATED AND WRITTEN DIRECTION HAS BEEN PROVIDED BY THE CONTRACTING OFFICER.

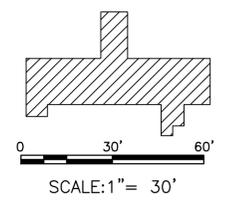
SITE REMOVAL NOTES

- LIMITS AND ITEMS SHOWN FOR REMOVAL ARE BASED ON BEST AVAILABLE RECORD MAPPING. REMOVE ANY ITEMS NOT SHOWN WITHIN THE LIMITS OF CONSTRUCTION NECESSARY TO COMPLETE THE REQUIRED WORK. ITEMS TO REMAIN THAT ARE DAMAGED OR REQUIRE REMOVAL DURING CONSTRUCTION SHALL BE REPLACED TO MEET AND/OR EXCEED EXISTING CONDITIONS.
- DISPOSE OF ALL DEBRIS AND CONSTRUCTION MATERIALS IN AN APPROVED OFF-SITE WASTE DISPOSAL FACILITY.
- SAW CUT PAVEMENT FOR ANY UTILITY REMOVAL OR INSTALLATION LOCATED BENEATH PAVED SURFACES.

DATE	
SYN	DESCRIPTION
JACOBS 501 NORTH BROADWAY ST. LOUIS, MISSOURI 63102 TEL 314-335-4000 FAX 314-335-5012	
APPROVED	
FOR COMMANDER NAVFAC DWG	
ACTIVITY	
D. COREY MELTON, TRAINING DIRECTOR SWDS	
SATISFACTORY TO 6/18/15	
DES	AW
DRW	AW
CHK	RC
PH/DM	RS / JMS
BRANCH MANAGER	
CHIEF ENG/ARCH DWG	
FIRE PROTECTION	
DEPARTMENT OF THE NAVY	NAVFAC MID-ATLANTIC
GREAT LAKES NAVAL STATION	GREAT LAKES, ILLINOIS
RENOVATE SWOSU FIREFIGHTING TRAINER (BUILDING 510)	
CIVIL GENERAL NOTES, LEGENDS, AND ABBREVIATIONS	
SCALE:	NTS
EPRJECT NO.:	1310337
CONSTR. CONTR. NO.:	N40085-15-R-8720
NAVFAC DRAWING NO.:	12689571
SHEET	9 OF 86
C-001	



A1 SITE DEMOLITION PLAN
SCALE: 1" = 30'

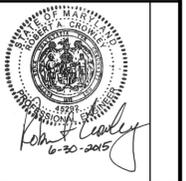


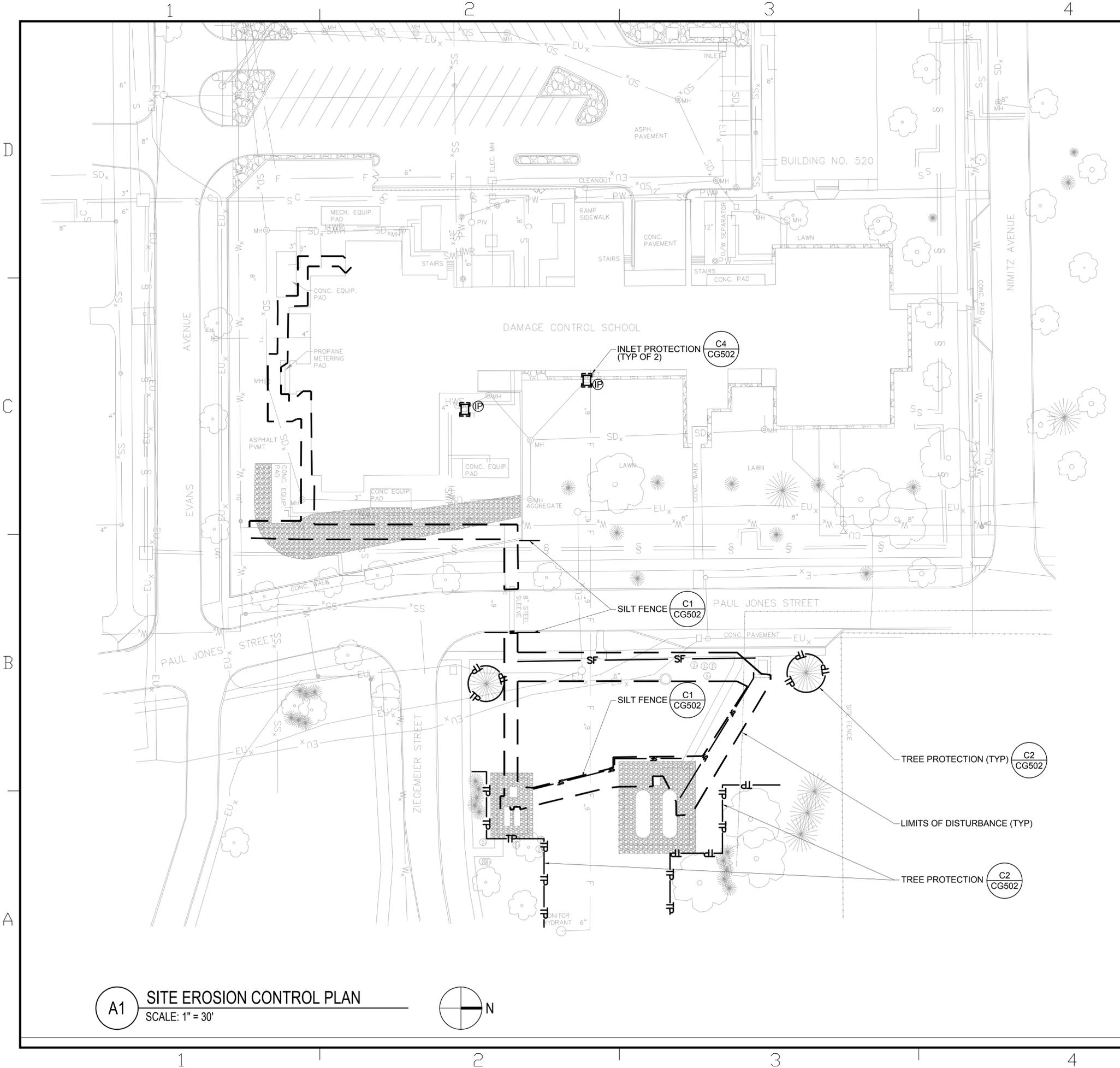
GENERAL NOTES

1. EXISTING ASPHALT AND CONCRETE PAVEMENT TO BE REMOVED SHALL BE SAW CUT IN A MANNER RESULTING IN CLEAN, STRAIGHT LINES. REFER TO DETAIL D2 SHEET CU-501 FOR MORE INFORMATION.
2. EXISTING UTILITIES TO REMAIN SHALL BE PROTECTED AT ALL TIMES.
3. EXTEND REMOVAL OF EXISTING CONCRETE SIDEWALKS AND CURB AND GUTTER TO NEAREST CONTRACTION JOINT. DO NOT CUT/BREAK PAVEMENT BETWEEN JOINTS.

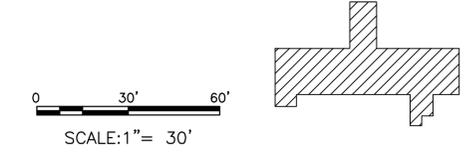
KEYED NOTES

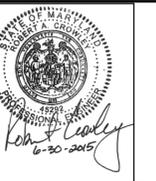
- ① REMOVE AND STORE SECTIONS OF CHAIN LINK FENCING AND POSTS TO ACCOMMODATE INSTALLATION OF NEW PROPANE LINE.
- ② PROPANE LINE 4' UNDER STREET TO BE REMOVED FROM 8" STEEL SLEEVE. SLEEVE AND VENTILATION PIPING AT ENDS TO REMAIN FOR INSTALLATION OF NEW LINE.
- ③ PROPANE LINE BETWEEN LIQUID PROPANE TANKS AND VAPORIZERS TO BE REMOVED.

	DATE
	SYN DESCRIPTION
	
	
	
<small>501 NORTH BROADWAY ST. LOUIS, MISSOURI 63102 TEL 314-335-4000 FAX 314-335-5012</small>	
APPROVED	
FOR COMMANDER NAVFAC DWG	
ACTIVITY	
D. COREY MELTON, TRAINING DIRECTOR SWDS	
SATISFACTORY TO: 6/18/15	
DES	AW
DRW	AW
CHK	RC
RC	RC
PM/TM RS / JMS	
BRANCH MANAGER	
CHIEF ENG/ARCH DWG	
FIRE PROTECTION	
DEPARTMENT OF THE NAVY	NAVFAC MID-ATLANTIC
GREAT LAKES NAVAL STATION	GREAT LAKES, ILLINOIS
RENOVATE SWOSU FIREFIGHTING TRAINER (BUILDING 510)	CIVIL
EXISTING CONDITIONS AND SITE REMOVAL PLAN	
SCALE: 1" = 30'	
EPRJCT NO: 1310337	
CONSTR. CNTR. NO: N40085-15-R-8720	
NAVFAC DRAWING NO: 12689572	
SHEET 10 OF 86	
C-101	

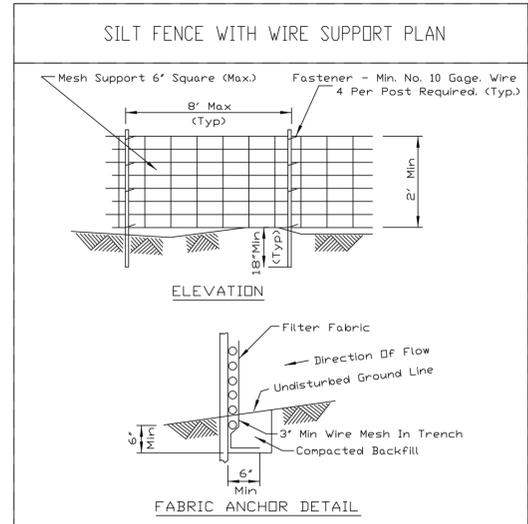


A1 SITE EROSION CONTROL PLAN
SCALE: 1" = 30'



SYMBOL		DESCRIPTION		DATE
  JACOBS 501 NORTH BROADWAY ST. LOUIS, MISSOURI 63102 TEL 314-335-4000 FAX 314-335-5012				
APPROVED				
FOR COMMANDER NAVFAC DWG				
ACTIVITY				
D. COREY MELTON, TRAINING DIRECTOR SWDS				
SATISFACTORY TO 6/18/15				
DES	AW	DRW	AW	CHK RC
PM/DM	RS / JMS			
BRANCH MANAGER				
CHIEF ENG/ARCH DWG				
FIRE PROTECTION				
DEPARTMENT OF THE NAVY		NAVAL FACILITIES ENGINEERING COMMAND		
NAVFAC MID-ATLANTIC		GREAT LAKES, ILLINOIS		
GREAT LAKES NAVAL STATION		RENOVATE SWOSU FIREFIGHTING TRAINER (BUILDING 510)		
		CIVIL EROSION AND SEDIMENT CONTROL PLAN		
SCALE: 1" = 30'				
EPRJCT NO: 1310337				
CONSTR. CONTR. NO: N40085-15-R-8720				
NAVFAC DRAWING NO: 12689573				
SHEET 11 OF 86				
CG101				

IF SHEET IS LESS THAN 22" X 34"
REDUCED PRINT - USE GRAPHIC SCALES

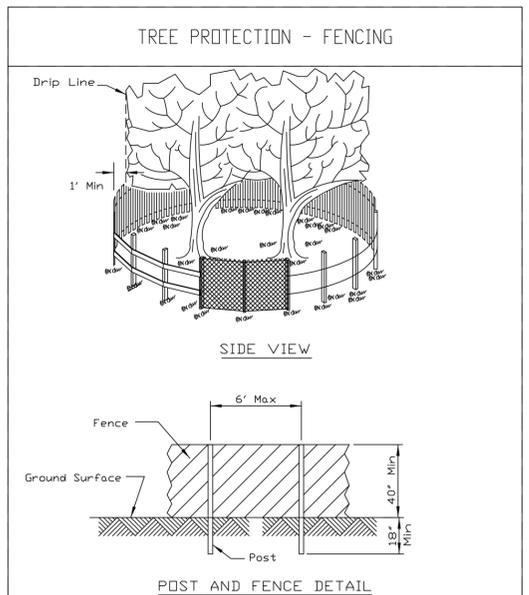


NOTES:

1. Wires of mesh support shall be min. gage no. 12.
2. Temporary sediment fence shall be installed prior to any grading work in the area to be protected. They shall be maintained throughout the construction period and removed in conjunction with the final grading and site stabilization.
3. Filter fabric shall meet the requirements of material specification 592 Geotextile Table 1 or 2, Class I with equivalent opening size of at least 30 for nonwoven and 50 for woven.
4. Fence posts shall be either standard steel post or wood post with a minimum cross-sectional area of 3.0 sq. in.

REFERENCE	STANDARD DWG. NO.
Project _____	IL-620W
Designed _____	SHEET 1 OF 2
Checked _____	DATE 3-3-95
Approved _____	

C1 SILT FENCE-WIRE SUPPORT DETAIL
SCALE: NTS SOURCE: IL URBAN MANUAL CG502

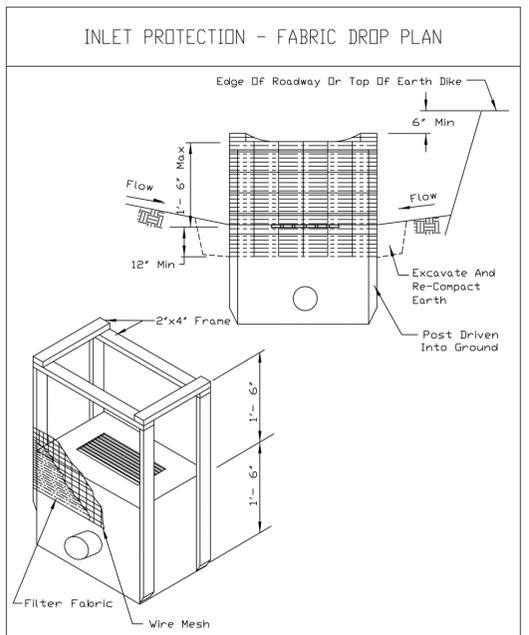


NOTES:

1. The fence shall be located a minimum of 1 foot outside the drip line of the tree to be saved and in no case closer than 5 feet to the trunk of any tree.
2. Fence posts shall be either standard steel posts or wood posts with a minimum cross sectional area of 3.0 sq. in.
3. The fence may be either 40' high snow fence, 40' plastic web fencing or any other material as approved by the engineer/inspector.

REFERENCE	STANDARD DWG. NO.
Project _____	IL-690
Designed _____	SHEET 1 OF 1
Checked _____	DATE 4-7-94
Approved _____	

C2 TREE PROTECTION FENCING DETAIL
SCALE: NTS SOURCE: IL URBAN MANUAL CG-502



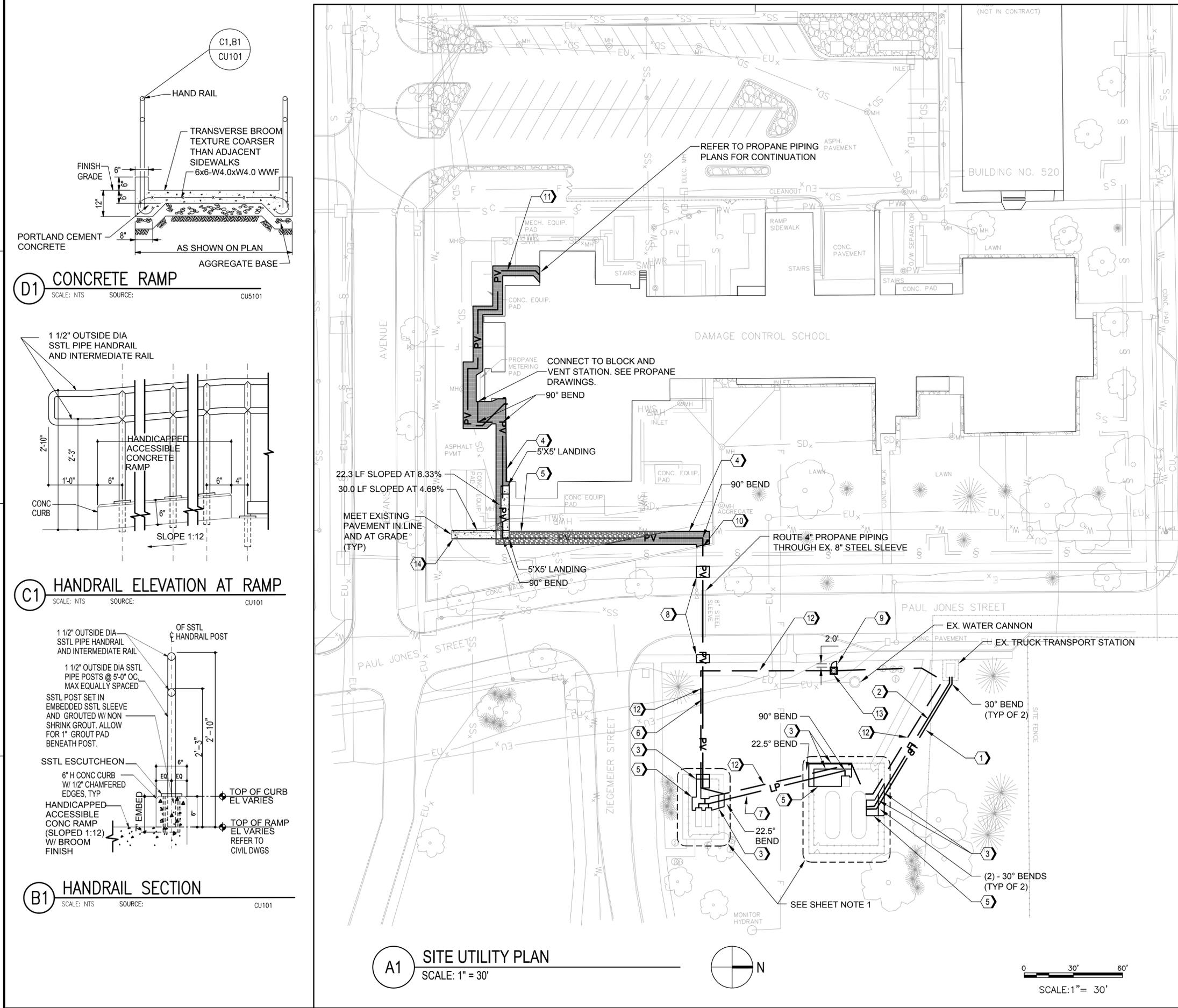
NOTES:

1. Filter fabric shall meet the requirement of material specification 592 GEOTEXTILE table 1 or 2, class I, with an EDS of at least 30 for nonwoven and 50 for woven.
2. The wire mesh shall have a maximum opening of at least 6 inches.
3. Limit drainage area to the inlet protection to 1 acre.

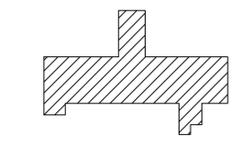
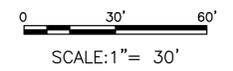
REFERENCE	STANDARD DWG. NO.
Project _____	IL-560
Designed _____	SHEET 1 OF 1
Checked _____	DATE 6-29-93
Approved _____	

C4 INLET PROTECTION-FABRIC DROP
SCALE: NTS SOURCE: IL URBAN MANUAL CG-502

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501 NORTH BROADWAY ST. LOUIS, MISSOURI 63102 TEL 314-335-4000 FAX 314-335-5012		
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FOR COMMANDER NAVFAC DWG		
ACTIVITY		
D. COREY MELTON, TRAINING DIRECTOR SWDS		
SATISFACTORY TO 6/18/15		
DES	AW	DRW AW
PM/DM	RS	JMS
BRANCH MANAGER		
CHIEF ENG/ARCH DWG		
FIRE PROTECTION		
DEPARTMENT OF THE NAVY	NAVFAC MID-ATLANTIC	NAVFAC ENGINEERING COMMAND
GREAT LAKES NAVAL STATION	GREAT LAKES, ILLINOIS	RENOVATE SWOSU FIREFIGHTING TRAINER (BUILDING 510)
CIVIL EROSION AND SEDIMENT CONTROL DETAILS		
SCALE:	NTS	
EPROJCT NO.:	1310337	
CONSTR. CONTR. NO.:	N40085-15-R-8720	
NAVFAC DRAWING NO.:	12689575	
SHEET	13	OF 86
CG502		



A1 SITE UTILITY PLAN
SCALE: 1" = 30'



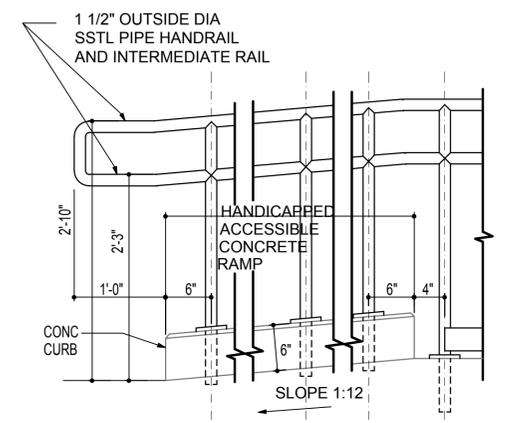
SHEET NOTES

1. REFER TO PROPANE SITE PLANS FOR REPLACEMENT OF ALL ABOVEGROUND PIPING AND APPURTENANCES ASSOCIATED WITH THE 12,000 GALLON PROPANE STORAGE TANKS, VAPORIZERS, AND FIRST STAGE REGULATORS.
2. ALL PROPANE LIQUID AND PROPANE EQUALIZATION VAPOR PIPING HORIZONTAL BENDS SHALL BE 45°, UNLESS NOTED OTHERWISE
3. ALL PROPANE PIPING WILL REPLACE EXISTING PROPANE VAPOR AND LIQUID PIPING 4" UNDERGROUND.

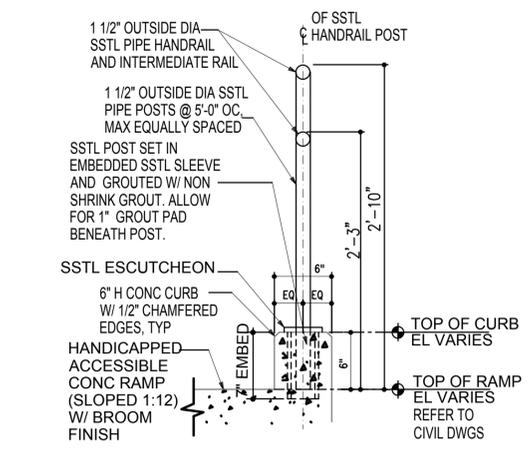
KEYED NOTES

- 1 100 LF, 1.25-INCH PROPANE EQUALIZATION VAPOR LINE. REFER TO PROPANE SITE PLANS AND SPECIFICATIONS FOR PIPE MATERIAL.
- 2 100 LF, 3-INCH LIQUID PROPANE LINE. REFER TO PROPANE SITE PLANS AND SPECIFICATIONS FOR PIPE MATERIAL.
- 3 RESET CHAIN LINK POSTS AND FENCE FABRIC. FENCE POSTS SHALL BE INSTALLED A MINIMUM OF 48-INCHES BELOW GRADE. FENCE LINE POSTS SHALL BE 12-INCHES IN DIAMETER AND CORNER/END POSTS SHALL BE 14-INCHES IN DIAMETER. HEIGHT OF RESET FENCE FABRIC AND BARBED WIRE SHALL MATCH EXISTING.
- 4 ASPHALT PAVEMENT REPLACEMENT. REFER TO DETAIL A1 ON SHEET CU-501. MATCH EXISTING PAVEMENT SLOPE. MEET EXISTING PAVEMENT IN LINE AND AT GRADE.
- 5 GRAVEL SURFACE REPLACEMENT. REFER TO DETAIL B1 ON SHEET CU-501.
- 6 373 LF, 4-INCH PROPANE VAPOR PIPING. REFER TO PROPANE SITE PLANS AND SPECIFICATIONS FOR PIPE MATERIAL.
- 7 2-INCH LIQUID PROPANE PIPING. REFER TO PROPANE SITE PLANS AND SPECIFICATIONS FOR PIPE MATERIAL.
- 8 CONCRETE SIDEWALK. REFER TO DETAIL C1 ON SHEET CU-501. MATCH EXISTING WIDTH AND CROSS SLOPE OF ADJACENT SIDEWALK. MEET EXISTING SIDEWALK IN LINE AND AT GRADE.
- 9 PROVIDE NEW REMOTE EMERGENCY SHUTOFF VALVE 75' FROM EXISTING TRANSPORT STATION, CENTERED ON A 42" X 42" CONCRETE UTILITY PAD. REFER TO DETAIL C3 ON SHEET CU501. INSTALL (2) BOLLARDS SPACED AT 5'-0" O.C., SET 2'-0" FROM FENCE LINE ON WEST SIDE OF ENCLOSURE. REFER TO DETAIL A1 ON SHEET PP502.
- 10 CORE DRILL 10" DIA. OPENING THROUGH SCREEN WALL FOUNDATION AND PROVIDE A 8" DIA. STEEL SLEEVE THROUGH OPENING. INSTALL NONSHRINK GROUT BETWEEN DRILLED OPENING AND STEEL SLEEVE PIPE.
- 11 120 LF 3" PROPANE VAPOR PIPING.
- 12 INSTALL 1/4" CO2 TUBING. TUBING SHALL EXTEND ACROSS SITE AND CONNECT TO EMERGENCY SHUTOFF VALVE, PROVIDING A CONTINUOUS LOOPED SYSTEM BACK TO CO2 STORAGE TANK.
- 13 INSTALL 6'-0" HIGH CHAIN LINK FENCE AROUND CONCRETE UTILITY PAD, SET 1'-0" FROM EDGE OF PAD. REFER TO DETAIL A3 ON SHEET CU501. INSTALL (1) 4'-0" WIDE PEDESTRIAN SWING GATE ON WEST SIDE OF FENCED ENCLOSURE. REFER TO DETAIL C5 ON SHEET CU501
- 14 INSTALL 5' WIDE ADA RAMP WITH LANDING PADS. SEE DETAILS D1, C1, AND B1 ON SHEET CU101.

D1 CONCRETE RAMP
SCALE: NTS SOURCE: CU5101

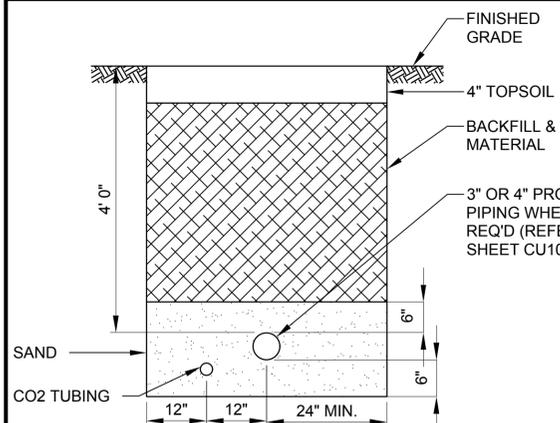


C1 HANDRAIL ELEVATION AT RAMP
SCALE: NTS SOURCE: CU101

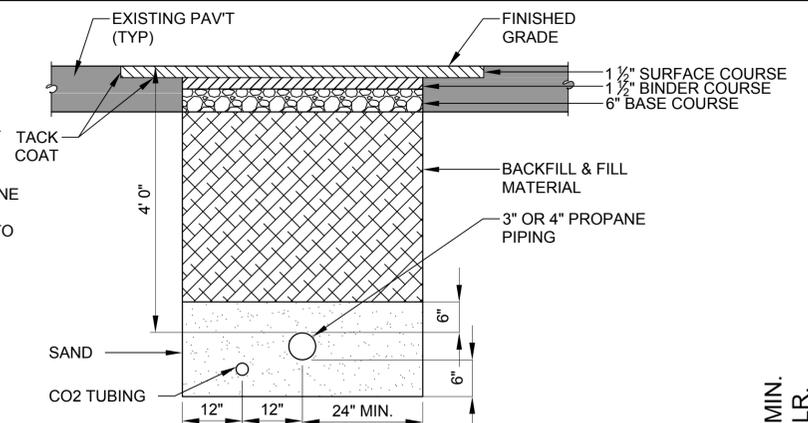


B1 HANDRAIL SECTION
SCALE: NTS SOURCE: CU101

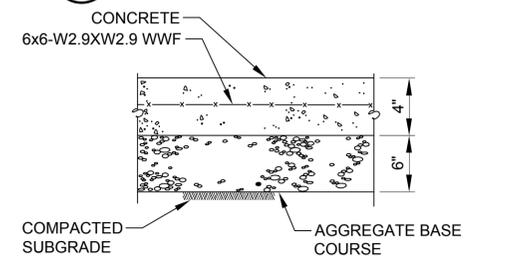
	DATE
	SYN DESCRIPTION
<small>501 NORTH BROADWAY ST. LOUIS, MISSOURI 63102 TEL 314-335-4000 FAX 314-335-5012</small>	
APPROVED	
FOR COMMANDER NAVFAC DWG	
ACTIVITY	
D. COREY MELTON, TRAINING DIRECTOR SWDS	
SATISFACTORY TD 6/18/15	
DES	AW [DRW] AW [CHK] RC
PH/DM	RS / JMS
BRANCH MANAGER	
CHIEF ENG/ARCH DWG	
FIRE PROTECTION	
DEPARTMENT OF THE NAVY	NAVFAC MID-ATLANTIC
GREAT LAKES NAVAL STATION	GREAT LAKES, ILLINOIS
RENOVATE SWDS/J FIREFIGHTING TRAINER (BUILDING 510)	CIVIL UTILITY PLAN
SCALE: 1" = 30'	PROJECT NO: 1310337
CONSTR. CONTR. NO. N40085-15-R-8720	NAVFAC DRAWING NO. 12689576
SHEET 14 OF 86	
CU101	



D1 UNPAVED TRENCH DETAIL
SCALE: NTS SOURCE: CU501

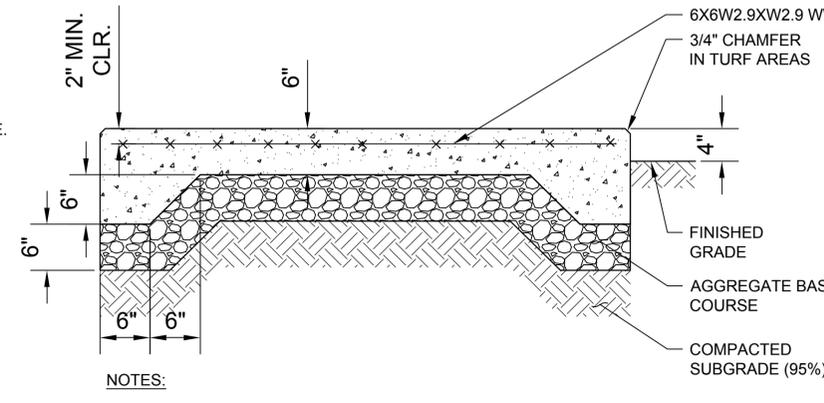


D2 PAVED TRENCH DETAIL
SCALE: NTS SOURCE: CU501



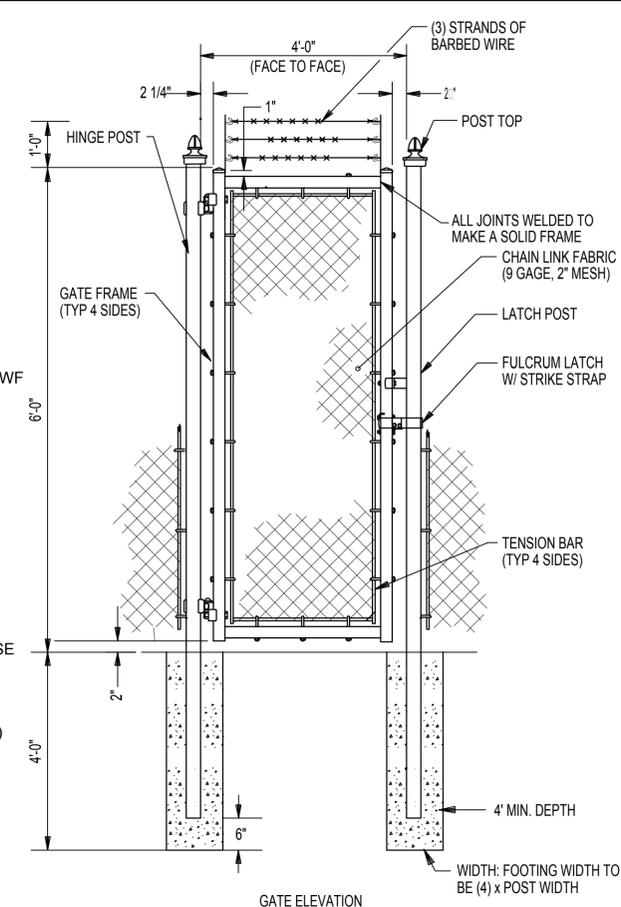
C1 CONCRETE SIDEWALK DETAIL
SCALE: NTS SOURCE: CU501

NOTES:
1. 5' WIDE SIDEWALK - TRANSVERSE CONTROL JOINTS AT 5' INTERVALS, NO LONGITUDINAL JOINTS FOR PAVEMENT LESS THAN 10'.
2. EXPANSION JOINTS TO BE PLACED BETWEEN ADJACENT SLABS, AT BUILDING LINE, AT CURBS, OR AT PENETRATING STRUCTURES.
3. SIDEWALK REPLACEMENT TO MATCH WIDTH OF EXISTING SIDEWALK.

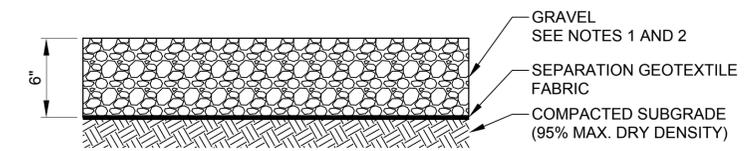


C3 CONCRETE UTILITY PAD DETAIL
SCALE: NTS SOURCE: CU501

NOTES:
1. MIN. CONCRETE STRENGTH $f_c' = 4000$ psi
2. REFER TO SITE PLAN FOR FOR SLAB DIMENSIONS AND LOCATIONS.
3. EXTEND THE LENGTH AND WIDTH OF THE CONCRETE UTILITY PAD A MINIMUM OF 6 INCHES BEYOND THE LENGTH AND WIDTH OF THE SELECTED UTILITY EQUIPMENT ON EACH SIDE.
4. COORDINATE ANY CONDUIT PENETRATIONS WITH SELECTED ELECTRICAL/MECHANICAL EQUIPMENT.

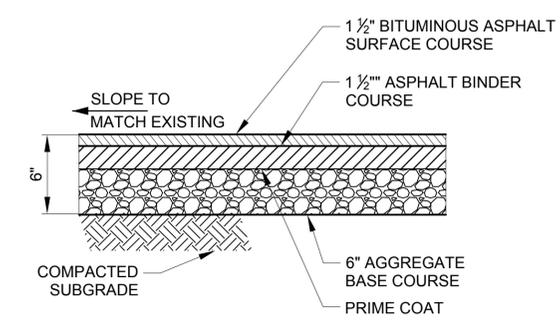


C5 PEDESTRIAN SWING GATE DETAIL
SCALE: NTS SOURCE: CU501



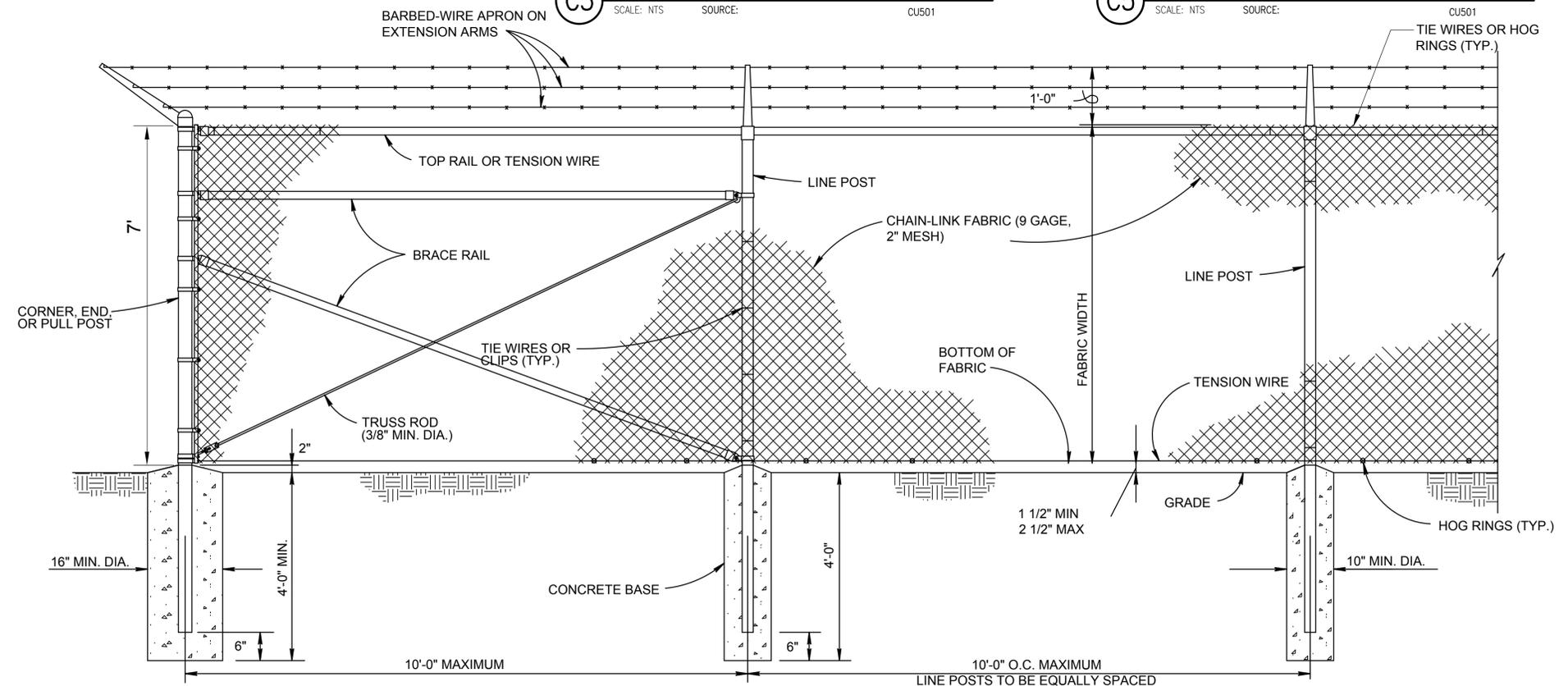
B1 GRAVEL SURFACE DETAIL
SCALE: NTS SOURCE: CU501

NOTES:
1. WATER WORN, HARD, DURABLE GRAVEL, WASHED FREE OF LOAM, SAND, CLAY, AND OTHER FOREIGN SUBSTANCES. SIZE RANGE SHALL BE FROM 1.5 INCHES TO 3/4 INCHES MINIMUM.
2. GRAVEL SHALL BE UNIFORM COLOR, MATCHING EXISTING AND ACCEPTABLE TO THE COR.



A1 ASPHALT PAVEMENT DETAIL
SCALE: NTS SOURCE: CU501

NOTE: INSTALL ASPHALT PAVEMENT TO ENSURE POSITIVE FLOW TOWARDS DRAINAGE STRUCTURE AND TO PRECLUDE LOW SPOTS.



A3 CHAIN LINK FENCE DETAIL
SCALE: NTS SOURCE: CU501

DATE	
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DES	AW
DRW	AW
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FIRE PROTECTION	
DEPARTMENT OF THE NAVY	NAVFAC MID-ATLANTIC
GREAT LAKES, ILLINOIS GREAT LAKES NAVAL STATION RENOVATE SWOSU FIREFIGHTING TRAINER (BUILDING 510)	
CIVIL SITE DETAILS	
SCALE:	NTS
PROJECT NO.:	1310337
CONSTR. CONTR. NO.:	N40085-15-R-8720
NAVFAC DRAWING NO.:	12689577
SHEET	15 OF 86
CU501	