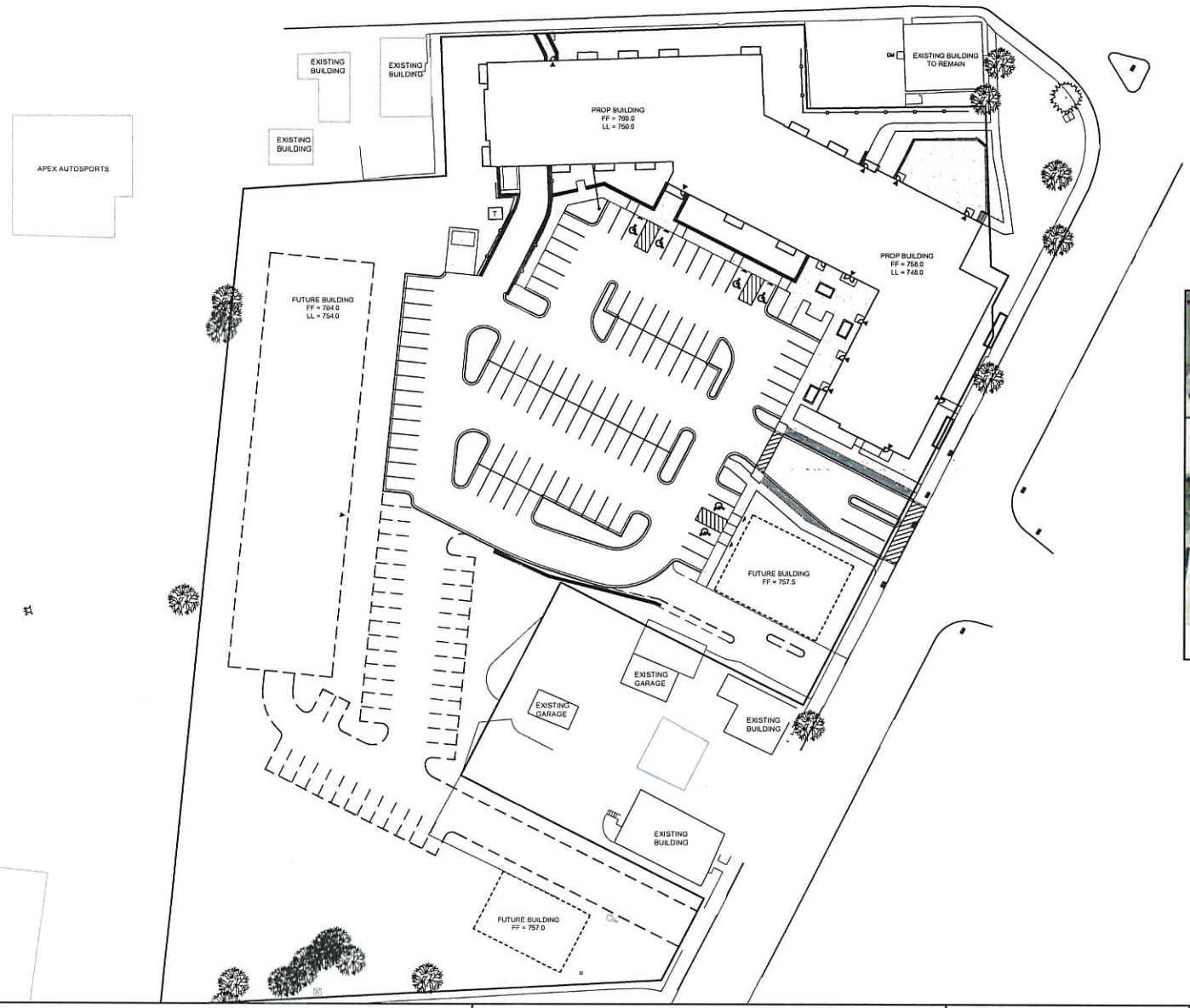


PROJECT LOCATION MAP

PLAN | DESIGN | DELIVER

PINNACLE ENGINEERING GROUP
ENGINEERING | NATURAL RESOURCES | SURVEYING

GRAFTON MIXED USE

GRAFTON, WI

SITE PLAN

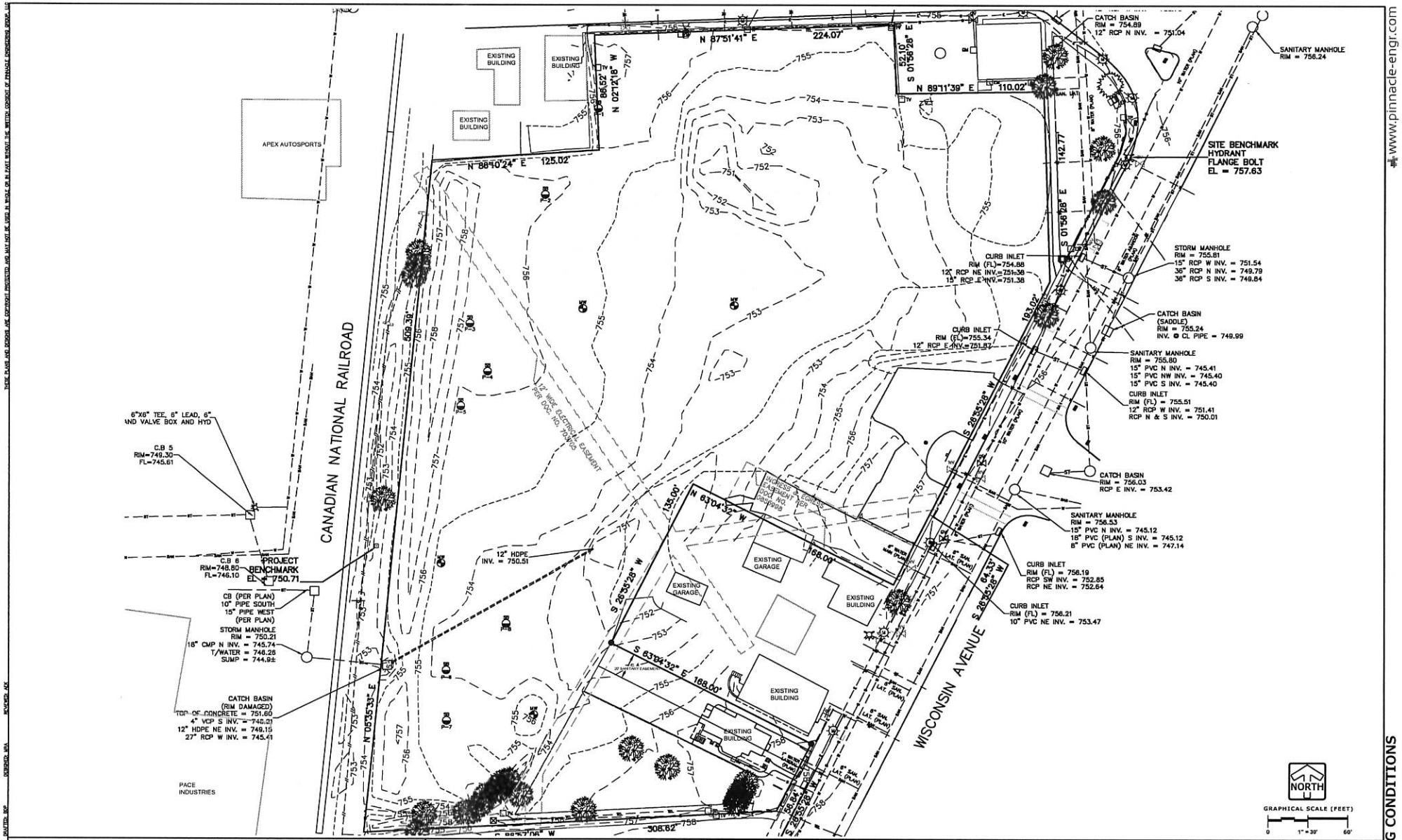
REVISIONS

PEG JOB No. 455.00
PEG PM AEK
START DATE 05/02/16
SCALE 1"=30'

SHEET
C-2
C-11

SITE PLAN

www.pinnacle-engr.com



PLAN | DESIGN | DELIVER
www.pinnacle-engr.com

PINNACLE ENGINEERING GROUP
ENGINEERING | NATURAL RESOURCES | SURVEYING

WISCONSIN OFFICE: 15650 W. BLUEMOUND ROAD BROOKFIELD, WI 53005 (262) 754-8888 CHICAGO | MICHIGAN | NEW HAMPSHIRE

GRAFTON MIXED USE

GRAFTON, WI

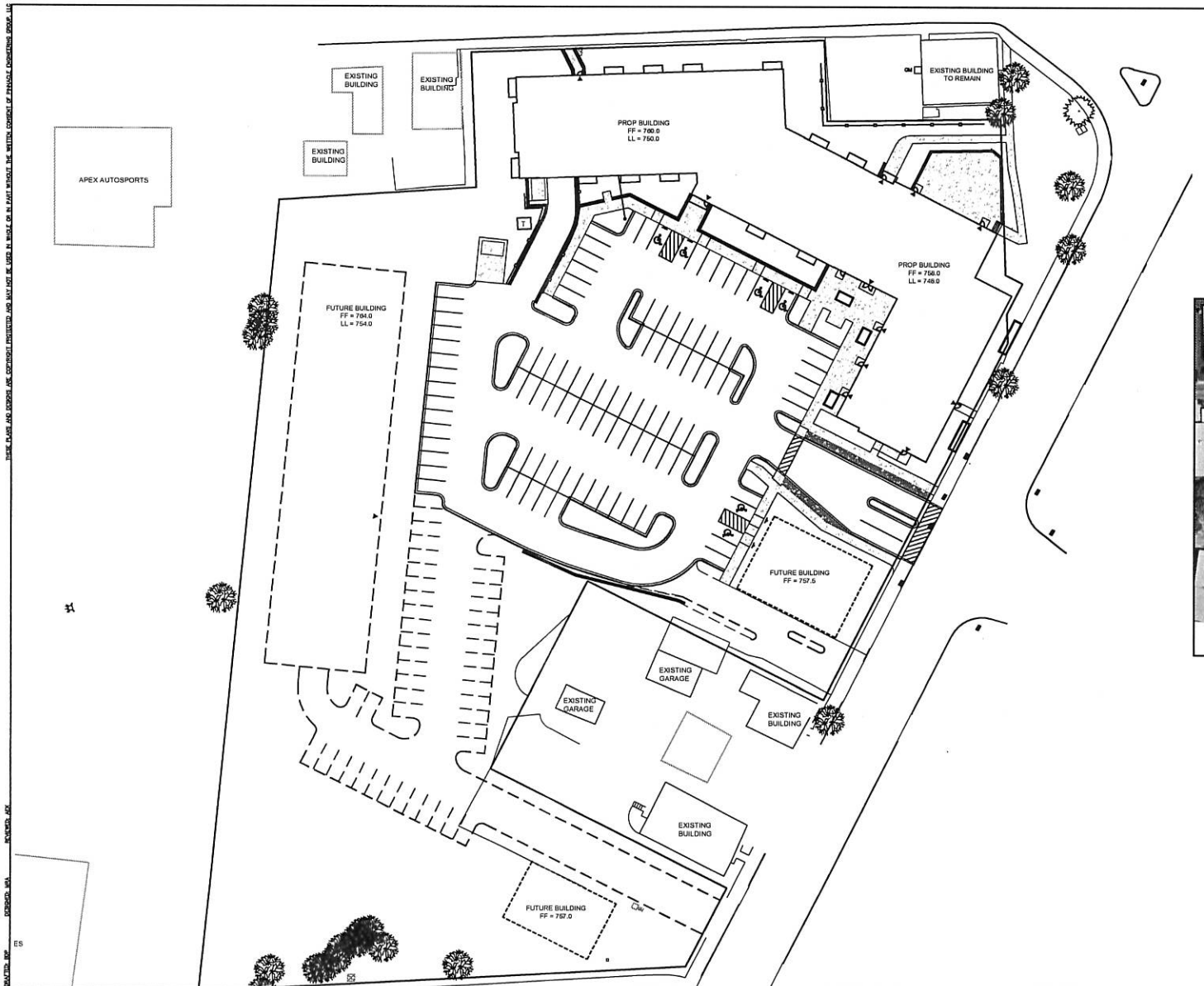
EXISTING CONDITIONS

REVISIONS

SHEET C-1 C-11

EXISTING CONDITIONS

www.pinnacle-engr.com



PROJECT LOCATION MAP

NORTH

GRAPHICAL SCALE (FEET)

0 1" = 30' 60'

PLAN | DESIGN | DELIVER

www.pinnacle-engr.com

PINNACLE ENGINEERING GROUP

ENGINEERING | NATURAL RESOURCES | SURVEYING

WISCONSIN OFFICE:
15850 W. BLUEMOUND ROAD
BROOKFIELD, WI 53005
(262) 754-8888

GRAFTON MIXED USE

GRAFTON, WI

SITE PLAN

REVISIONS

PEG JOB No. 445.00
PEG PM AEK
START DATE 05/02/16
SCALE 1"=30'

SHEET
C-2
C-11

SITE PLAN

© COPYRIGHT 2016

THESE PLANS AND DESIGNS ARE COPYRIGHT PROTECTED AND MAY NOT BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF PINNACLE ENGINEERING GROUP, LLC

DRAFTED: BDP DESIGNED: MPA REVIEWED: AEK

PLAN | DESIGN | DELIVER

PINNACLE ENGINEERING GROUP

ENGINEERING | NATURAL RESOURCES | SURVEYING

WISCONSIN OFFICE: 15850 W. BLUEMOUND ROAD BROOKFIELD, WI 53005 (262) 754-6888

GRAFTON MIXED USE

GRAFTON, WI

GRADING & EROSION CONTROL PLAN

REVISIONS

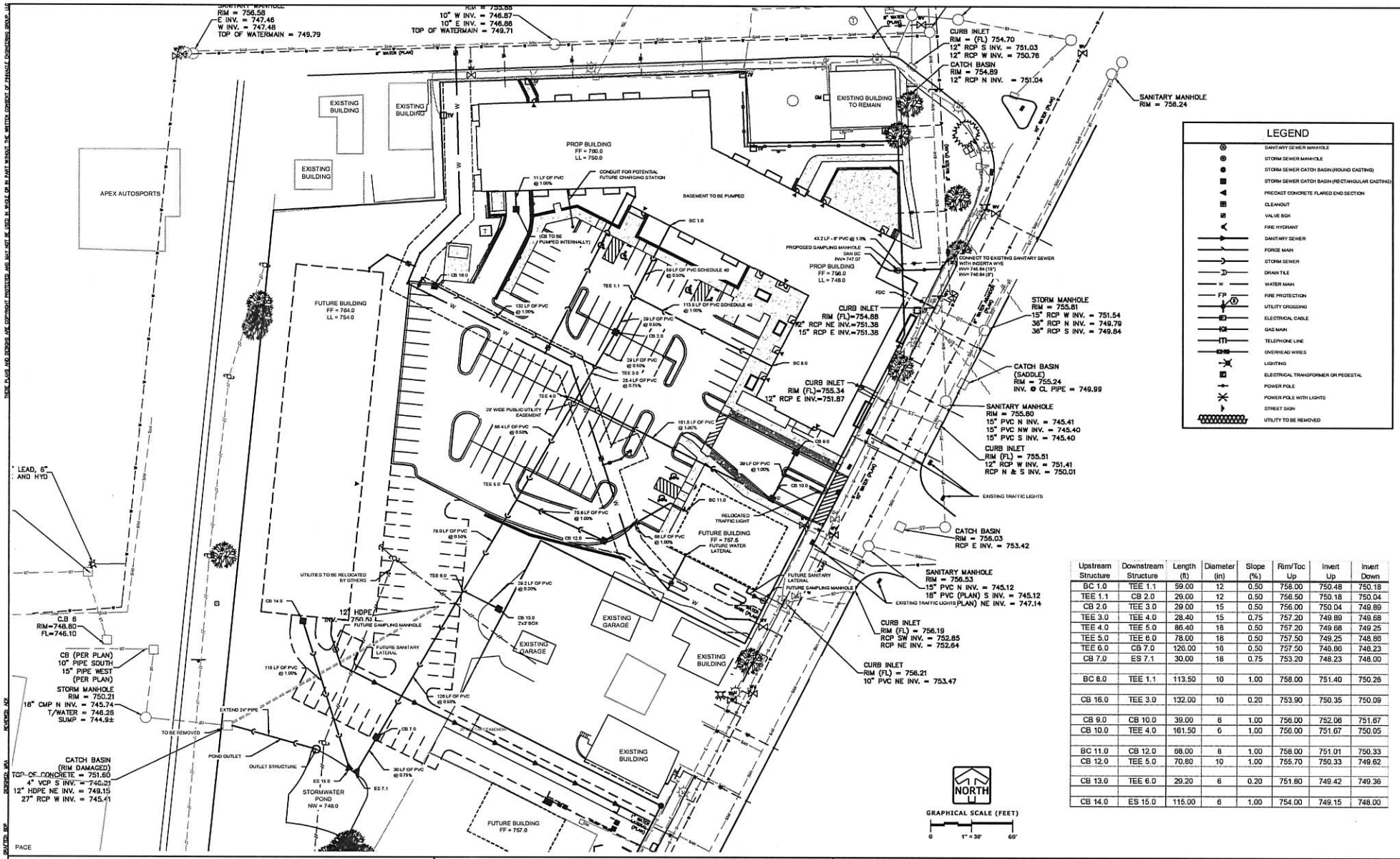
PEG JOB No. 445.00
PEG PM AEK
START DATE 05/02/16
SCALE 1"=30'

SHEET C-3 C-11

© COPYRIGHT 2016

GRADING & EROSION CONTROL PLAN

www.pinnacle-engr.com



Upstream Structure	Downstream Structure	Length (ft)	Diameter (in)	Slope (%)	Rim/Toc Up	Invert Up	Invert Down
BC 1.0	TEE 1.1	59.00	12	0.50	758.00	750.48	750.18
TEE 1.1	CB 2.0	20.00	12	0.50	756.50	750.18	750.04
CB 2.0	TEE 3.0	29.00	15	0.50	756.00	750.04	749.89
TEE 3.0	TEE 4.0	28.40	15	0.75	757.20	749.89	749.68
TEE 4.0	TEE 5.0	86.40	18	0.50	757.20	749.68	749.25
TEE 5.0	TEE 6.0	78.00	18	0.50	757.50	749.25	748.86
TEE 6.0	CB 7.0	126.00	18	0.50	757.50	748.86	748.23
CB 7.0	ES 7.1	30.00	18	0.75	753.20	748.23	748.00
BC 8.0	TEE 1.1	113.50	10	1.00	758.00	751.40	750.26
CB 16.0	TEE 3.0	132.00	10	0.20	753.90	750.35	750.09
CB 9.0	CB 10.0	39.00	6	1.00	756.00	752.06	751.67
CB 10.0	TEE 4.0	161.50	6	1.00	756.00	751.67	750.05
BC 11.0	CB 12.0	68.00	8	1.00	758.00	751.01	750.33
CB 12.0	TEE 5.0	70.60	10	1.00	755.70	750.33	749.62
CB 13.0	TEE 6.0	29.20	6	0.20	751.80	749.42	749.36
CB 14.0	ES 15.0	115.00	6	1.00	754.00	749.15	748.00

PLAN | DESIGN | DELIVER
www.pinnacle-engr.com

PINNACLE ENGINEERING GROUP
ENGINEERING | NATURAL RESOURCES | SURVEYING

WISCONSIN OFFICE:
15850 W. BLUEMOUND ROAD
BROOKFIELD, WI 53005
(262) 754-8888
CHICAGO | MILWAUKEE | DANDRIDGE

GRAFTON MIXED USE

GRAFTON, WI

UTILITY PLAN

REVISIONS

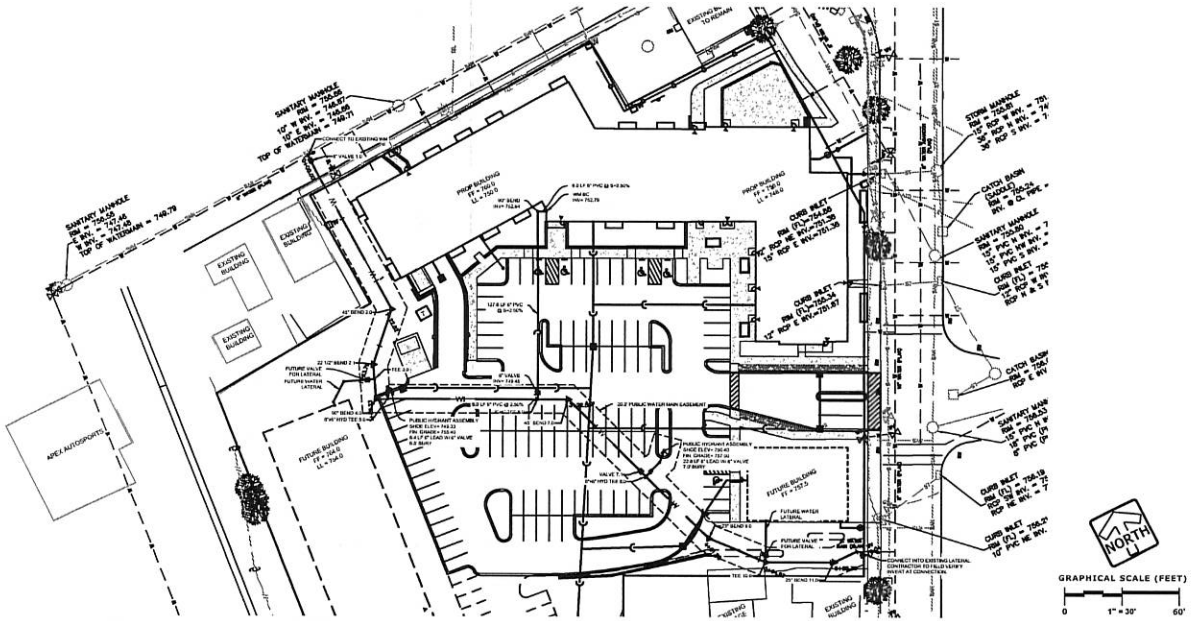
PEG JOB No: 655.00
PEG PM: BSK
START DATE: 08/02/21
SCALE: 1"=40'

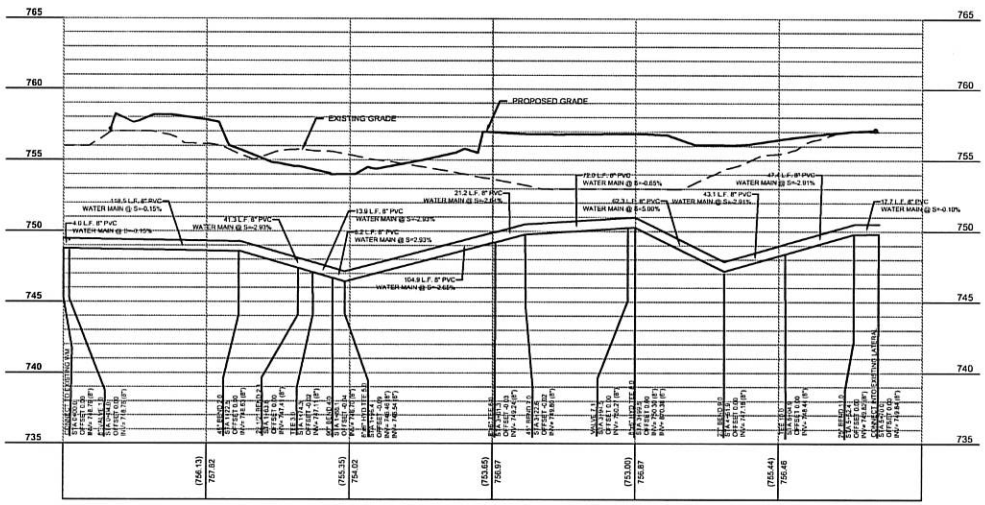
SHEET
C-4
C-11

UTILITY PLAN

www.pinnacle-engr.com

THESE PLANS AND DESIGNS ARE COPYRIGHT PROTECTED AND MAY NOT BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF PINNACLE ENGINEERING GROUP, LLC





PLAN | DESIGN | DELIVER
www.pinnacle-engr.com

PINNACLE ENGINEERING GROUP
ENGINEERING | NATURAL RESOURCES | SURVEYING

WISCONSIN OFFICE:
15450 W. BLUEMOUND ROAD
BROOKFIELD, WI 53005
(262) 754-8888
CHICAGO | MILWAUKEE | MINNEAPOLIS

GRAFTON MIXED USE
GRAFTON, WI

WATER MAIN PLAN & PROFILE

REVISIONS

PEG JOB No. 445.00
PEG PM AEK
START DATE 05/07/16
SCALE 1"=40'

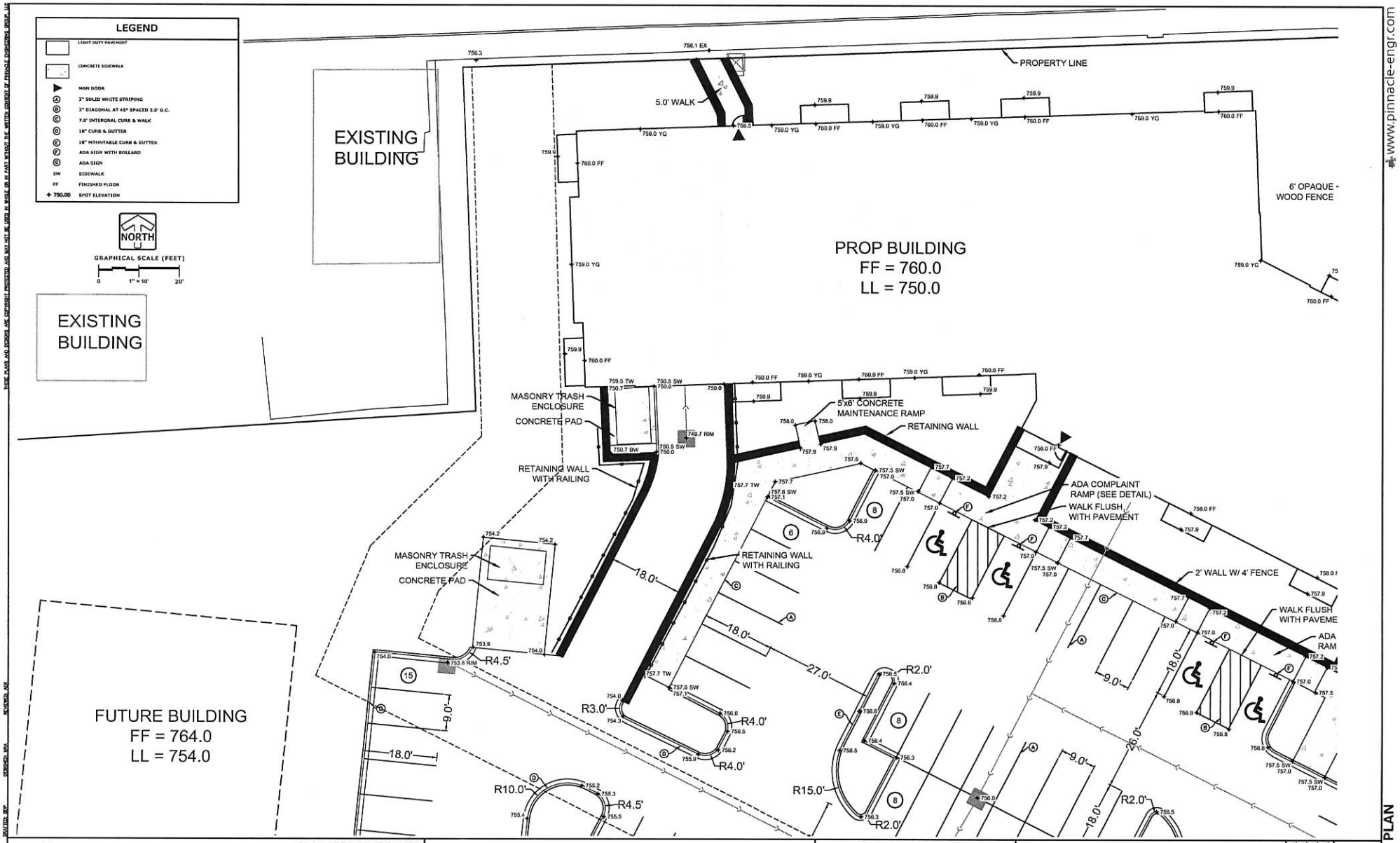
SHEET
C-5
C-11

WATER MAIN PLAN & PROFILE

www.pinnacle-engr.com

THESE PLANS AND DESIGNS ARE COPYRIGHT PROTECTED AND MAY NOT BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF PINNACLE ENGINEERING GROUP, LLC

DRAFTED: BDP DESIGNED: MPA REVIEWED: AEK



PLAN | DESIGN | DELIVER
www.pinnacle-engr.com

PINNACLE ENGINEERING GROUP
ENGINEERING | NATURAL RESOURCES | SURVEYING

WISCONSIN OFFICE:
15850 W. BLUEMOUND ROAD
BROOKFIELD, WI 53005
(262) 754-8888
CHICAGO/MAUKEE/NORTHWEST

GRAFTON MIXED USE

GRAFTON, WI

PAVING PLAN

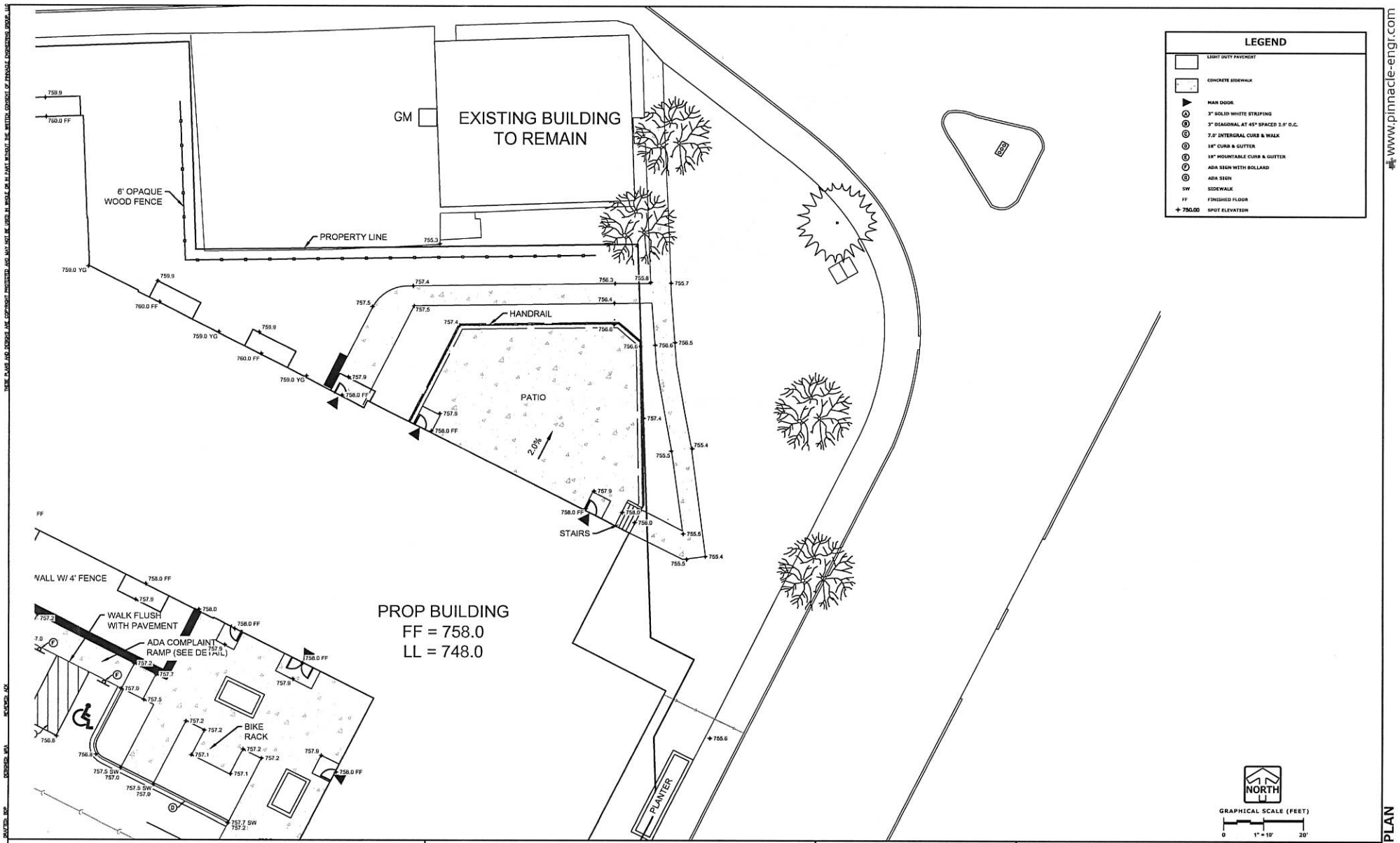
REVISIONS

PEG JOB No. 445.00
PEG PM AEK
START DATE 05/07/16
SCALE VALUE

SHEET
C-6
C-11

PAVING PLAN

www.pinnacle-engr.com



PLAN | DESIGN | DELIVER
www.pinnacle-engr.com

PINNACLE ENGINEERING GROUP
ENGINEERING | NATURAL RESOURCES | SURVEYING

WISCONSIN OFFICE:
15850 W. BLUEMOUND ROAD
BROOKFIELD, WI 53005
(262) 754 8888

GRAFTON MIXED USE

GRAFTON, WI

PAVING PLAN

REVISIONS

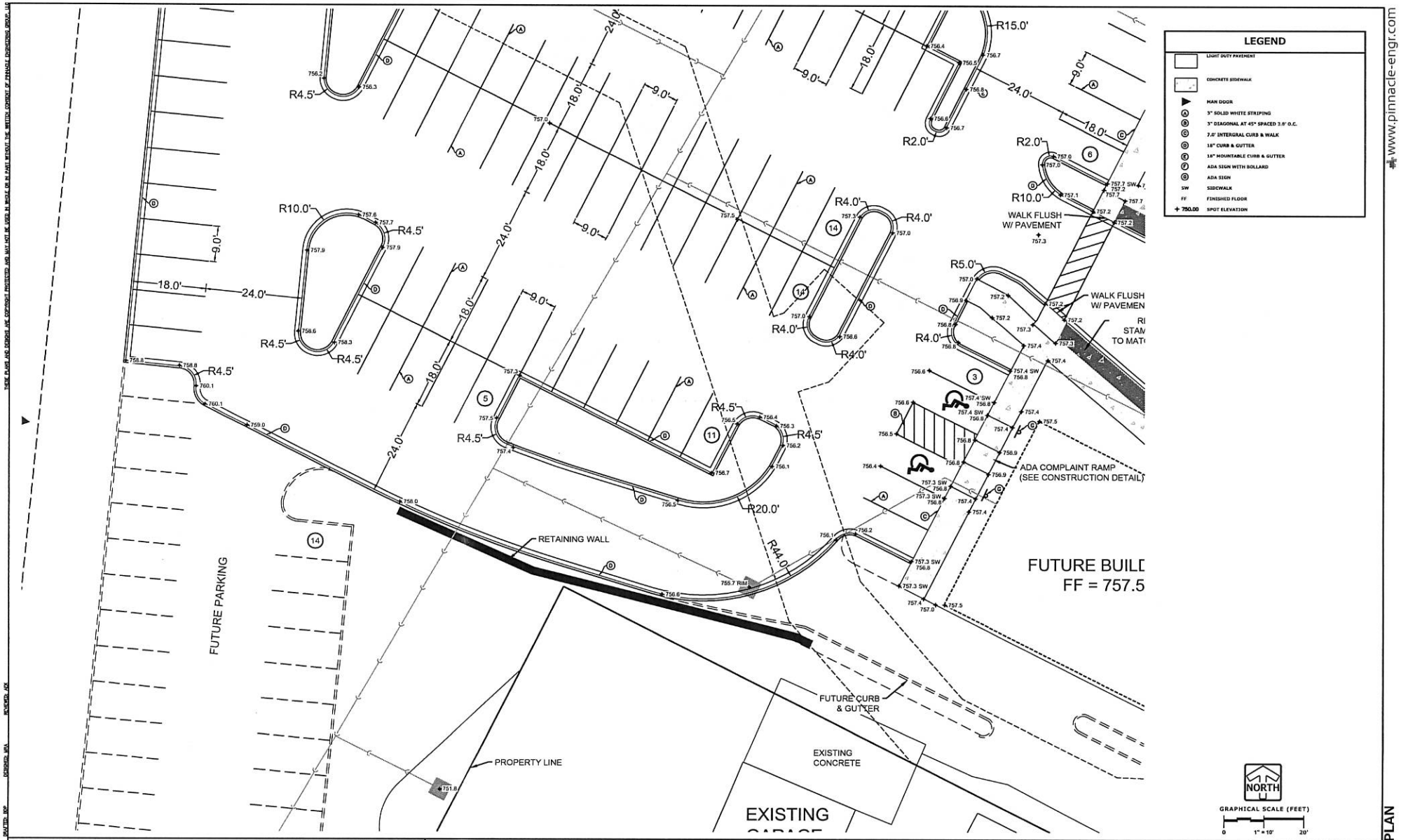
PEG JOB No. 445.00
PEG PM BSK
START DATE 02/02/16
SCALE VALUE

SHEET
C-7
C-11

PAVING PLAN

www.pinnacle-engr.com

THESE PLANS AND DESIGNS ARE COPYRIGHT PROTECTED AND MAY NOT BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF PINNACLE ENGINEERING GROUP, LLC



PLAN | DESIGN | DELIVER

PINNACLE ENGINEERING GROUP
ENGINEERING | NATURAL RESOURCES | SURVEYING

WISCONSIN OFFICE: 15850 W. BLUEMOUND ROAD BROOKFIELD, WI 53005 (262) 754-8888

GRAFTON MIXED USE
GRAFTON, WI

SITE PLAN

REVISIONS

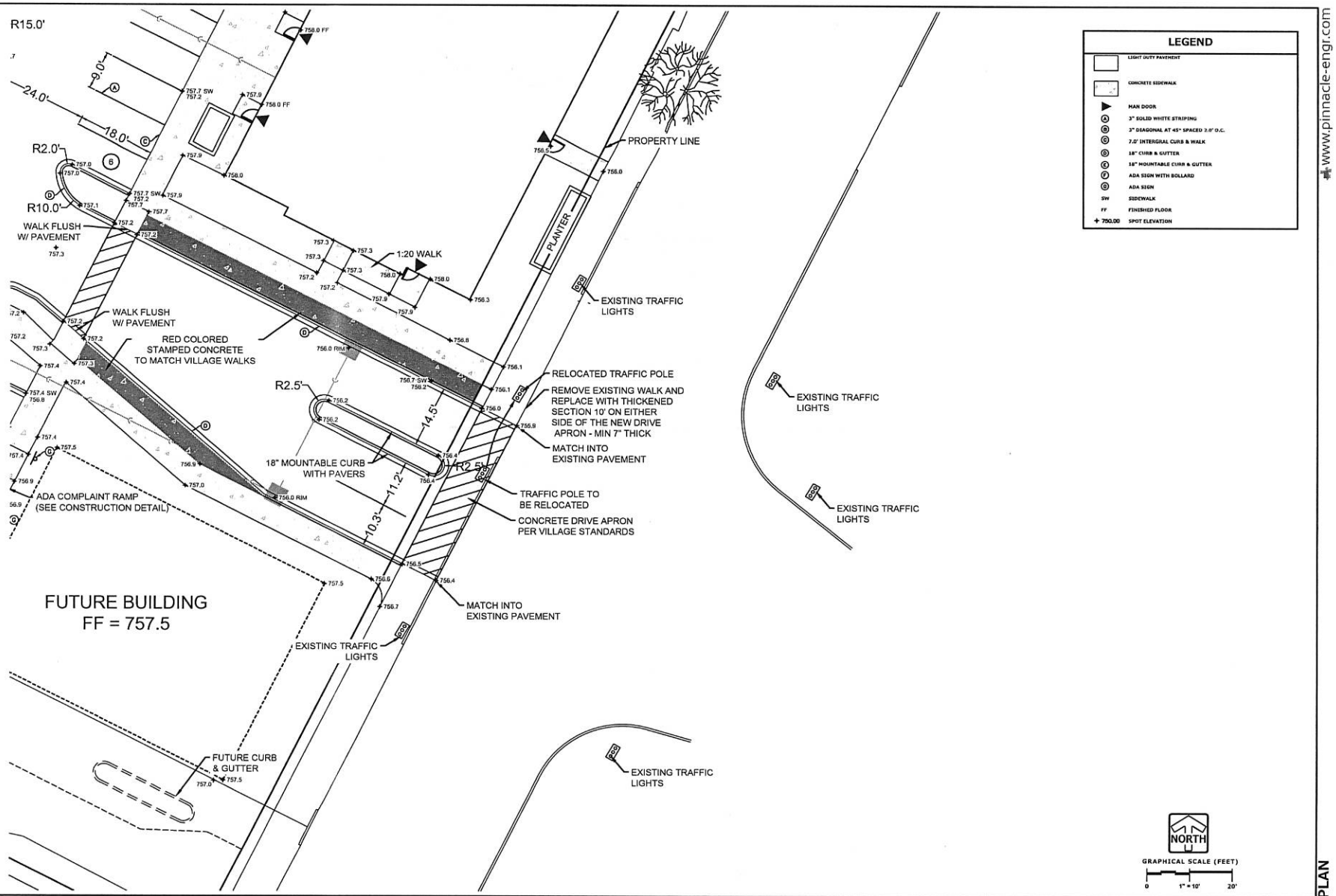
PEG JOB No. 445.00
PEG PM. AEK
START DATE 05/02/16
SCALE VALUE

SHEET C-8 C-11

PAVING PLAN

www.pinnacle-engr.com

© COPYRIGHT 2016



PLAN | DESIGN | DELIVER
www.pinnacle-engr.com

PINNACLE ENGINEERING GROUP
ENGINEERING | NATURAL RESOURCES | SURVEYING

WISCONSIN OFFICE:
15850 W. BLUEMOUND ROAD
BROOKFIELD, WI 53005
(262) 754-8888
CHICAGO | SAN JUAN | NEW MEXICO

GRAFTON MIXED USE
GRAFTON, WI

PAVING PLAN

REVISIONS

PEG JOB No. 445.00
PEG PH. AEK
START DATE 05/02/16
SCALE VALUE

SHEET C-9 C-11

PAVING PLAN

www.pinnacle-engr.com

GENERAL SPECIFICATIONS FOR CONSTRUCTION ACTIVITIES

1. THE PROPOSED IMPROVEMENTS SHALL BE CONSTRUCTED ACCORDING TO THE WISCONSIN D.O.T. STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, LATEST EDITION, THE STANDARD SPECIFICATIONS FOR SEWER & WATER IN WISCONSIN, AND WISCONSIN ADMINISTRATIVE CODE, SPS 360, 382-383, AND THE LOCAL ORDINANCES AND SPECIFICATIONS.
2. THE CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED FOR EXECUTION OF THE WORK. THE CONTRACTOR SHALL CONDUCT HIS WORK ACCORDING TO THE REQUIREMENTS OF THE PERMITS.
3. THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE MUNICIPALITY FORTY-EIGHT (48) HOURS PRIOR TO THE START OF CONSTRUCTION.
4. THE MUNICIPALITY SHALL HAVE THE RIGHT TO INSPECT, APPROVE, AND REJECT THE CONSTRUCTION OF THE PUBLIC PORTIONS OF THE WORK. THE OWNER SHALL HAVE THE RIGHT TO INSPECT, APPROVE, AND REJECT THE CONSTRUCTION OF ALL PRIVATE PORTIONS OF THE WORK.
5. THE CONTRACTOR SHALL INDEMNIFY THE OWNER, THE ENGINEER, AND THE MUNICIPALITY, THEIR AGENTS, ETC. FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION, INSTALLATION, AND TESTING OF THE WORK ON THIS PROJECT.
6. SITE SAFETY SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
7. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL UTILITY INFORMATION SHOWN ON THE PLANS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL CALL DIGGERS HOTLINE AT 1-800-242-8511 TO NOTIFY THE UTILITIES OF HIS INTENTIONS AND TO REQUEST FIELD STAKING OF EXISTING UTILITIES.
8. SILT FENCE AND OTHER EROSION CONTROL FACILITIES MUST BE INSTALLED PRIOR TO CONSTRUCTION OR ANY OTHER LAND DISTURBING ACTIVITY. FOLLOW THE SEQUENCE OF CONSTRUCTION ON THE EROSION CONTROL PLAN FOR MORE DETAILS. INSPECTIONS SHALL BE MADE WEEKLY OR AFTER EVERY RAINFALL OF 0.5" OR MORE. REPAIRS SHALL BE MADE IMMEDIATELY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL EROSION CONTROL FACILITIES ONCE THE THREAT OF EROSION HAS PASSED WITH THE APPROVAL OF THE GOVERNING AGENCY.
9. ANY ADJACENT PROPERTIES OR ROAD RIGHT-OF-WAYS WHICH ARE DAMAGED DURING CONSTRUCTION MUST BE RESTORED BY THE CONTRACTOR.
10. TRASH AND DEBRIS SHALL BE NOT BE ALLOWED TO ACCUMULATE ON THIS SITE AND THE SITE SHALL BE CLEAN UPON COMPLETION OF WORK.
11. THE OWNER SHALL HAVE THE RIGHT TO HAVE ALL MATERIALS USED IN CONSTRUCTION TESTED FOR COMPLIANCE WITH THESE SPECIFICATIONS.

SPECIFICATIONS FOR GRADING & EROSION CONTROL

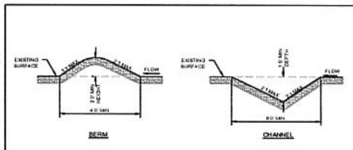
1. THE CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR THE COMPUTATIONS OF ALL GRADING AND FOR ACTUAL LAND BALANCE, INCLUDING UTILITY TRENCH SPOIL. THE CONTRACTOR SHALL IMPORT OR EXPORT MATERIAL AS NECESSARY TO COMPLETE THE PROJECT. CONTRACTOR SHALL NOTIFY OWNER OF THE NEED TO IMPORT OR HAUL OFF SOIL. ON-SITE LOCATIONS SUITABLE FOR BORROW OR FILL MAY BE PRESENT. COORDINATE WITH OWNER.
2. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING SOIL CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. A GEOTECHNICAL REPORT MAY BE AVAILABLE FROM THE OWNER.
3. SITE SHALL BE CLEARED TO THE LIMITS SHOWN ON THE PLANS. REMOVE VEGETATION FROM THE SITE. BURNING IS NOT PERMITTED. PROTECT TREES AND OTHER FEATURES FROM DAMAGE WITH FENCING. STOCKPILES SHALL NOT BE LOCATED CLOSER THAN 25 TO A DRAINAGE STRUCTURE OR FEATURE AND SHALL BE SURROUNDED WITH SILT FENCE.
4. THE GEOTECHNICAL ENGINEER IS RESPONSIBLE FOR VERIFYING COMPACTION AND FILL PLACEMENT IN THE FIELD. THE GEOTECHNICAL ENGINEER MAY SUPERCEDE THESE SPECIFICATIONS IF THERE IS GOOD CAUSE TO DO SO. AN EXPLANATION MUST BE SUBMITTED TO THE ENGINEER IN WRITING BEFORE ANY DEVIATIONS ARE MADE.
5. IF NO GEOTECHNICAL RECOMMENDATION IS AVAILABLE, THEN THE FOLLOWING SPECIFICATIONS SHALL APPLY. ALL FILL SHALL BE CONSIDERED STRUCTURAL FILL AND SHALL BE PLACED IN ACCORDANCE WITH THE FOLLOWING. THE COMPACTED FILL SUBGRADE SHALL CONSIST OF AND SHALL BE UNDERLAIN BY SUITABLE BEARING MATERIALS, FREE OF ALL ORGANIC, FROZEN OR OTHER DELETERIOUS MATERIAL AND INSPECTED AND APPROVED BY THE RESIDENT GEOTECHNICAL ENGINEER. PREPARATION OF THE SUBGRADE, AFTER STRIPPING, SHALL CONSIST OF PROOF ROLLING TO DETECT UNSTABLE AREAS THAT MIGHT BE UNDERCUT, AND COMPACTING THE SCARIFIED SURFACE TO THE SAME MINIMUM DENSITY INDICATED BELOW. THE COMPACTED FILL MATERIALS SHALL BE FREE OF ANY DELETERIOUS, ORGANIC OR FROZEN MATTER AND SHALL HAVE A MAXIMUM LIQUID LIMIT (ASTM D-4318) OF 30 AND PLASTICITY INDEX (ASTM D-4318) OF 10 RESPECTIVELY, UNLESS SPECIFICALLY TESTED AND FOUND TO HAVE LOW EXPANSIVE PROPERTIES AND APPROVED BY AN EXPERIENCED SOILS ENGINEER. [illegible] LESS THAN 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR (ASTM D-698) [illegible] DRY DENSITY, OR 5 PERCENT HIGHER THAN UNDERLYING FILL MATERIALS. [illegible]
6. NO FILL SHALL BE PLACED ON A WET OR SOFT SUBGRADE. THE SUBGRADE SHALL BE PROOF-ROLLED AND INSPECTED BY THE GEOTECHNICAL ENGINEER BEFORE ANY MATERIAL IS PLACED.
7. SUBGRADE TOLERANCES ARE +/-1" FOR LANDSCAPE AREAS AND +/- [illegible]" FOR ALL PAVEMENT AND BUILDING AREAS.
8. TOPSOIL SHALL BE FREE OF DELETERIOUS MATERIALS, ROOTS, OLD VEGETATION, ROCKS OVER 2" DIAMETER AND SHALL NOT BE EXCESSIVELY CLAYEY IN NATURE. NO CLUMPS LARGER THAN 1" ARE ACCEPTABLE. TOPSOIL MAY BE AMENDED AS NEEDED WITH SAND OR COMPOST TO BE LOOSE WHEN SPREAD.
9. THE CONTRACTOR SHALL MAINTAIN SITE DRAINAGE THROUGHOUT CONSTRUCTION. THIS MAY INCLUDE THE EXCAVATION OF TEMPORARY DITCHES OR PUMPING TO ALLEVIATE WATER PONDING. ANY DEWATERING SHALL NOT GO DIRECTLY TO STREAMS, CREEKS, WETLANDS OR OTHER ENVIRONMENTALLY SENSITIVE AREAS WITHOUT BEING TREATED FIRST. A DIRT BAG OR OTHER DEWATERING TREATMENT DEVICE MAY BE USED TO CAPTURE SEDIMENT FROM THE PUMPED WATER.
10. CONTRACTOR IS ADVISED THAT ALL MUD AND DEBRIS MUST NOT BE DEPOSITED ONTO THE ADJACENT ROADWAYS PER THE REQUIREMENT OF THE MUNICIPALITY OR OTHER APPROPRIATE GOVERNMENT AGENCIES. IN THE EVENT THIS OCCURS, THE ROADWAYS SHALL BE POWER SWEPT IMMEDIATELY AND ALL SEDIMENT REMOVED FROM DOWNSTREAM FACILITIES.

SPECIFICATIONS FOR PRIVATE UTILITIES

1. BEFORE PROCEEDING WITH ANY UTILITY CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE EACH EXISTING LATERAL OR POINT OF CONNECTION AND VERIFY THE LOCATION AND ELEVATION OF ALL UTILITIES. IF ANY EXISTING UTILITIES ARE NOT AS SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY FOR POSSIBLE REDESIGN.
2. ALL CONNECTIONS TO EXISTING PIPES AND MANHOLES SHALL BE CORED CONNECTIONS. CONNECTIONS TO WATERMAIN SHALL BE WET TAPED WITH A STAINLESS STEEP TAPPING SLEEVE.
3. PROPOSED SANITARY SEWER AND INTERNALLY CONNECTED STORM SEWER SHOWN ON THIS PLAN SHALL TERMINATE AT A POINT FIVE (5) FEET FROM THE EXTERIOR BUILDING WALL. THE EXACT LOCATION OF ALL DOWN SPOUTS CONNECTIONS SHALL BE PER THE ARCHITECTURAL PLANS.
4. CONTRACTOR SHALL NOT SHUT OFF WATER OR PLUG SANITARY SEWER IN MUNICIPAL LINES WITHOUT PRIOR APPROVAL.
5. MATERIALS FOR STORM SEWER SHALL BE AS FOLLOWS: STORM SEWER PIPE 48" OR LESS SHALL BE HIGH DENSITY POLYETHYLENE (HDPE) CORRUGATED PIPE WITH AN INTEGRALLY FORMED SMOOTH WATERWAY SUCH AS ADS N-12. FOR PIPE 12" OR LESS IN DIAMETER, PVC, ASTM D-3034, SDR-35, MAY ALSO BE USED. WHERE SPECIFICALLY REQUIRED, REINFORCED CONCRETE PIPE (RCP), ASTM C-76, CLASS III OR HIGHER, MAY BE USED. TRENCH SECTION SHALL BE CLASS "B" FOR PVC AND HDPE AND CLASS "C" FOR CONCRETE (PER STANDARD SPECIFICATIONS). MANHOLES, INLETS AND CATCH BASINS SHALL BE PRE-CAST REINFORCED CONCRETE, ASTM C478. CASTINGS SHALL BE HEAVY DUTY CAST IRON. AREA DRAINS SHALL BE ADS NYLOPLAST OR EQUIVALENT AND SHALL BE A MINIMUM OF 24" IN DIAMETER. CONNECTIONS TO EXISTING PIPES SHALL BE MADE WITH INSERTA WYE OR EQUIVALENT.
6. MATERIALS FOR SANITARY SEWER SHALL BE AS FOLLOWS: SANITARY SEWER SHALL BE PVC, ASTM D-3034, SDR-35 WITH RUBBER GASKETED JOINTS, CONFORMING TO ASTM D-3212. TRENCH SECTIONS SHALL BE CLASS "B" BEDDING (PER STANDARD SPECIFICATIONS). CRUSHED STONE CHIPS SHALL BE USED FOR BEDDING MATERIAL. CONNECTIONS SHALL BE MADE WITH A INSERTA WYE OR EQUIVALENT. A MINIMUM OF 6' OF COVER IS REQUIRED FOR ALL SANITARY SEWER.
7. MATERIALS FOR WATER SERVICES AND PRIVATE HYDRANTS SHALL BE AS FOLLOWS: WATER SERVICES SHALL BE PVC, HDPE, OR DI AS ALLOWED BY MUNICIPAL CODE. PVC SHALL BE AWWA C-900. DI SHALL BE AWWA C151, CLASS 52 (OR AS REQUIRED BY LOCAL CODE). TRENCH SECTIONS SHALL BE CLASS "B" BEDDING (PER STANDARD SPECIFICATIONS). CRUSHED STONE CHIPS SHALL BE USED FOR BEDDING MATERIAL. CONNECTION SHALL BE MADE WITH A WET TAP, CORPORATE STOP AND VALVE BOX PER MUNICIPAL STANDARDS. A MINIMUM OF 6' COVER IS REQUIRED FOR ALL WATERMAIN. VALVES SHALL BE NONRISING STEM, RESILIENT SEATED GATE VALVES COMPLYING WITH AWWA C509 WITH A THREE PIECE CAST IRON VALVE BOX. INSTALL THRUST BLOCKS AT ALL BENDS AND TEES. DISINFECT ALL NEW LINES AND OBTAIN SAFE WATER SAMPLE PRIOR TO USE.
8. EXTREME CAUTION MUST BE FOLLOWED REGARDING THE COMPACTION OF ALL UTILITY TRENCHES. MECHANICALLY COMPACTED GRANULAR BACKFILL IS REQUIRED UNDER & WITHIN 5 FEET OF ALL PAVEMENT INCLUDING SIDEWALKS. FLOODING OF BACKFILL MATERIAL IS NOT ALLOWED.
9. TRACER WIRE (NO. 8 SINGLE STRAND COPPER) AND WARNING TAPE SHALL BE INSTALLED ON ALL UTILITIES IN ACCORDANCE WITH THE LOCAL AND STATE CODES. TRACER WIRE SHALL TERMINATE IN A VALVECO TERMINAL BOX AT EACH END.
10. MANDREL TESTING ON SANITARY LINES AND PRESSURE TESTING ON WATERMAIN MAY BE REQUIRED BY THE OWNER OR MUNICIPALITY.
11. UPON COMPLETION OF FINAL PAVING OPERATIONS, THE UTILITY CONTRACTOR SHALL ADJUST ALL MANHOLE AND INLET RIMS AND VALVE BOXES TO FINISHED GRADE.

SPECIFICATIONS FOR PAVING

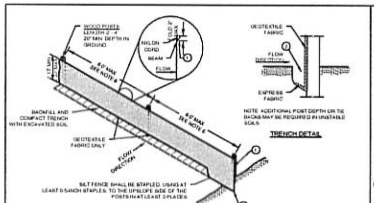
1. AGGREGATES USED IN THE CRUSHED STONE BASE SHALL CONFORM TO THE GRADATION REQUIREMENTS SECTIONS 301.2 AND 305.2.2 OF THE STANDARD SPECIFICATIONS. THICKNESS SHALL BE PER THE DETAIL ON THE PLANS. BASE SHALL BE [illegible] INCH DIAMETER UNLESS NOTED OTHERWISE. RECYCLED MATERIALS MAY BE ALLOWED WITH APPROVAL FROM THE OWNER.
2. SUBGRADE SHALL BE PROOFROLLED AND APPROVED BY A GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF STONE BASE. EXCAVATE UNSUITABLE AREAS AND REPLACE WITH BREAKER RUN STONE AND RECOMPACT. REFER TO THE GEOTECHNICAL REPORT FOR ADDITIONAL SPECIFICATIONS.
3. EXISTING PAVEMENT SHALL BE SAWCUT IN NEAT STRAIGHT LINES TO FULL DEPTH AT ANY POINT WHERE EXISTING PAVEMENT IS REMOVED. CURB AND WALK SHALL BE REMOVED TO THE NEAREST JOINT. REMOVED PAVEMENT SHALL BE REPLACED WITH THE SAME SECTION AS EXISTING. MUNICIPAL STANDARDS MAY REQUIRE ADDITIONAL WORK.
4. ASPHALT FOR PARKING AREAS AND THE PRIVATE ROAD SHALL BE PER THE DETAILS. MATERIALS AND PLACEMENT SHALL CONFORM TO THE DOT STANDARD SPECIFICATIONS, SECTION 450 AND 460. TYPE E-0.3 IS REQUIRED UNLESS NOTED OTHERWISE. A COMMERCIAL GRADE MIX MAY BE SUBSTITUTED ONLY WITH APPROVAL FROM THE OWNER.
5. CONCRETE FOR CURB, DRIVEWAY, WALKS AND NON-FLOOR SLABS SHALL CONFORM TO SECTION 415 OF THE STANDARD SPECIFICATIONS, GRADE A, ASTM C-94, 6 BAG MIX, WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3,500 PSI. JOINTING SHALL BE PER SECTION 415.3.7 OF THE STANDARD SPECIFICATIONS WITH CONSTRUCTION JOINTS HAVING A MAXIMUM SPACING OF 10'. EXPANSION JOINTS SHALL BE PROVIDED EVERY 50'. CONCRETE SHALL BE FINISHED PER SECTION 415.3.8 WITH A MEDIUM BROOM TEXTURE. A CURING MEMBRANE IN CONFORMANCE WITH SECTION 415.3.12 IS REQUIRED.



NOTES:

1. DIVERSION MAY REQUIRE AREAS OF BERM AND OTHER AREAS OF CHANNEL TO PROVIDE SUFFICIENT PERIMETER PROTECTION.
2. DIVERSION BERM VERSUS CHANNEL PRACTICES SHALL BE SELECTED SUCH TO PREVENT PONDING (E.G. - POSITIVE DRAINAGE SHALL BE MAINTAINED).
3. FOR DIVERSIONS THAT ARE TO SERVE LONGER THAN 30 DAYS, THE SIDE SLOPES INCLUDING THE RIDGE, AND THE DOWN SLOPE SIDE OF THE DIVERSION SHALL BE STABILIZED AS SOON AS THEY CONSTRUCTED BY EQUIPMENT TRACKING AND TEMPORARY SEEDING. FOR DIVERSIONS SERVING LESS THAN 30 DAYS, THE DOWN SLOPE SIDE OF THE DIVERSION SHALL BE STABILIZED AS SOON AS CONSTRUCTED BY EQUIPMENT TRACKING AND TEMPORARY SEEDING.
4. DIVERSIONS SHALL BE PROTECTED FROM DAMAGE BY CONSTRUCTION ACTIVITIES. AT ALL POINTS WHERE DIVERSION BERMS OR CHANNELS WILL BE CROSSED BY CONSTRUCTION EQUIPMENT, THE DIVERSION SHALL BE SHAPED APPROPRIATELY AND/OR TEMPORARY CULVERTS OF ADEQUATE CAPACITY MAYBE ADDED AT CROSSINGS.
5. AT MINIMUM, INSTALL ONE DITCH CHECK (SEE DETAIL) FOR EVERY 2 VERTICAL FEET OF DROP.
6. DIVERSIONS SHALL, AT A MINIMUM, BE INSPECTED WEEKLY AND WITHIN 24 HOURS AFTER EVERY PRECIPITATION EVENT THAT PRODUCES 0.5 INCHES OF RAIN OR MORE DURING A 24 HOUR PERIOD. MAINTENANCE SHALL BE COMPLETED AS SOON AS POSSIBLE WITH CONSIDERATION TO SITE CONDITIONS. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE HEIGHT OF THE DIVERSION BERM.

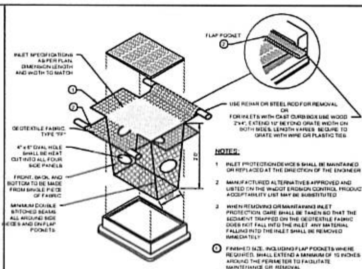
DIVERSION BERM / CHANNEL



NOTES:

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

SILT FENCE



NOTES:

1. INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.
2. MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE WisDOT EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.
3. WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

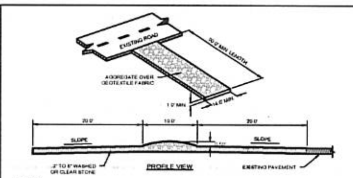
(1) FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10 INCHES AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

(2) FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2 INCH X 4 INCH.

INSTALLATION NOTES:

1. DO NOT INSTALL INLET PROTECTION TYPE "D" IN INLETS SHALLOWER THAN 30 INCHES, MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.
2. TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3 INCHES OF THE GRATE.
3. THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3 INCHES. WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3 INCHES CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4 INCHES FROM THE BOTTOM OF THE BAG.

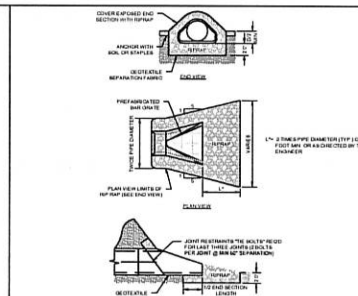
INLET PROTECTION



NOTES:

1. ALL TRACKING PAD MATERIALS AND INSTALLATION SHALL BE IN CONFORMANCE WITH WI DNR TECHNICAL STANDARD 1057.
2. TRACKING PADS SHALL BE INSTALLED PRIOR TO ANY TRAFFIC LEAVING THE SITE. CONTRACTOR SHALL VERIFY LOCATION WITH OWNER.
3. THE AGGREGATE FOR TRACKING PADS SHALL BE 3 TO 6 INCH CLEAR OR WASHED STONE. ALL MATERIALS TO BE RETAINED ON A 3-INCH SIEVE.
4. THE AGGREGATE SHALL BE PLACED IN A LAYER AT LEAST 12 INCHES THICK. ON SITES WHERE SATURATED CONDITIONS ARE EXPECTED DURING THE LIFE OF THE PAD, THE PAD SHALL BE UNDERLAIN WITH GEOTEXTILE FABRIC WHICH MEETS MATERIAL SPECIFICATION 592 GEOTEXTILE, TABLE 1 OR 2, CLASS I, II OR IV, TO PREVENT MIGRATION OF UNDERLYING SOILS INTO THE STONE LAYER.
5. THE TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT. MINIMUM WIDTH IS 14 FEET FOR ONE-WAY TRAFFIC AND 20 FEET FOR TWO-WAY TRAFFIC, WITH AN ADDITIONAL INCREASE OF 4 FEET FOR TRAILER TRAFFIC. THE TRACKING PAD SHALL BE A MINIMUM 50 FEET LONG.
6. ANY SEDIMENT TRACKED ONTO A PUBLIC OR PRIVATE ROAD SHOULD BE REMOVED BY STREET CLEANING, NOT FLUSHING, AT THE END OF EACH WORKING DAY.
7. TRACKING PADS SHALL, AT A MINIMUM, BE INSPECTED WEEKLY AND WITHIN 24-HOURS AFTER EVERY PRECIPITATION EVENT THAT PRODUCES 0.5-INCHES OF RAIN OR MORE DURING A 24-HOUR PERIOD.
8. THE TRACKING PAD PERFORMANCE SHALL BE MAINTAINED BY SCRAPING OR TOP-DRESSING WITH ADDITIONAL AGGREGATE.

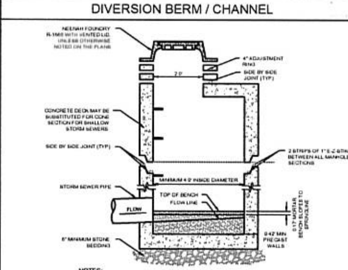
CONSTRUCTION ENTRANCE



NOTES:

1. RIP RAP AND GEOTEXTILE FABRIC SHALL MEET REQUIREMENTS FOR STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

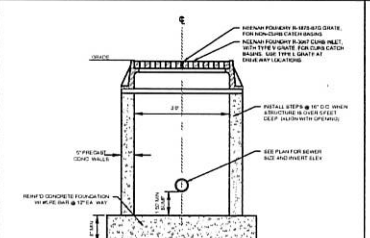
RIP RAP AT END SECTIONS



NOTES:

1. CLEAN UNDERSIDE OF ADJUSTING RING OR CAST IRON FRAME AND SET IN PLACE.
2. TUCK POINT MORTAR INTO ANNULAR CRACK AND BACKPLASTERED INSIDE AND OUTSIDE OF ALL JOINTS.
3. THE FLAT TOP MAY BE USED IN LIEU OF THE TAPERED TOP WHEN FIELD CONDITIONS PROHIBIT THE USE OF A FLAT TAPERED TOP.
4. MANHOLE CONSTRUCTION TO MEET REQUIREMENTS OF ASTM C478.
5. ECCENTRIC CONE SECTION OF MANHOLE TO BE SET OUTSIDE OF VEHICULAR WHEEL PATH NEAR(S) OF ROADWAY.

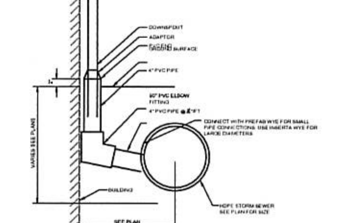
STORM SEWER MANHOLE



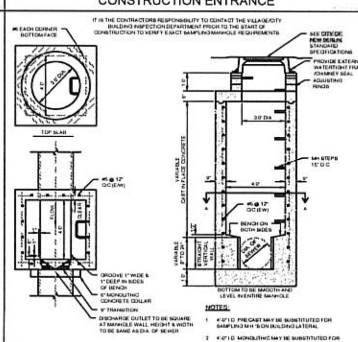
NOTES:

1. EASY STICK, RUBBER GASKET OR APPROVED EQUIVALENT SHALL BE PLACED AT ALL JOINTS BETWEEN ADJUSTING RINGS FOR STORM CATCH BASINS.
2. THE FLAT TOP MAY BE USED IN LIEU OF THE TAPERED TOP WHEN FIELD CONDITIONS PROHIBIT USE OF A TAPERED TOP.

2' x 3' CATCH BASIN



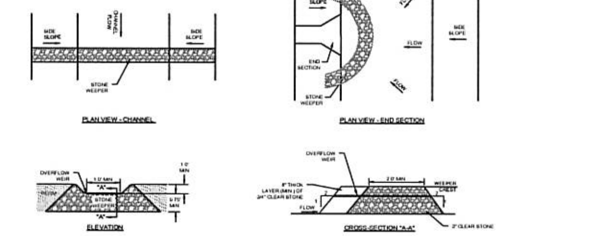
DOWNSPOUT DRAIN BUILDING CONNECTION



NOTES:

1. 4'-0" I.D. PRECAST MAY BE SUBSTITUTED FOR SAMPLING MH'S ON BUILDING LATERAL.
2. 4'-0" I.D. MONOLITHIC MAY BE SUBSTITUTED FOR GAUGING MH'S ON MUNICIPAL SEWERS.

SAMPLING AND GAUGING MANHOLE



NOTES:

1. STONE WEEPER SHALL BE CONSTRUCTED WITH 2 INCH CLEAR STONE.
2. THE OVERFLOW WEIR SHALL BE LOCATED 0.75' ABOVE BERM BOTTOM.
3. EXTEND STONE WEEPER ACROSS CHANNEL OPENING TO MEET SWALE/DITCH SIDE SLOPES. WHERE CHANNEL IS LESS THAN 3 FEET DEEP, REDUCE WEIR HEIGHT TO 1 FOOT AND INCREASE THE TOP OF STONE WEEPER FROM 2 FEET TO 4 FEET.

STONE WEEPER

PLAN | DESIGN | DELIVER
www.pinnacle-engr.com
PINNACLE ENGINEERING GROUP
ENGINEERING | NATURAL RESOURCES | SURVEYING
WISCONSIN OFFICE:
15850 W. BLUEMOUND ROAD
BROOKFIELD, WI 53005
(262) 754-8888

GRAFTON MIXED USE

GRAFTON, WI

CONSTRUCTION DETAILS & SPECIFICATIONS

REVISIONS

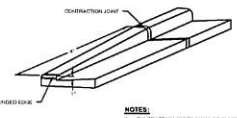
PEG JOB No. 445.00
PEG PM ARK
START DATE 05/02/16
SCALE NTS

SHEET C-10 C-11

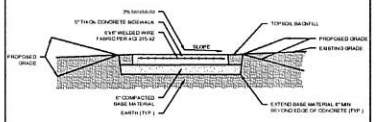
© COPYRIGHT 2016

DRAFTER: BDP
DESIGNER: MRA
REVIEWER: ARK

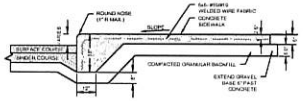
THESE PLANS AND DESIGNS ARE COPYRIGHT PROTECTED AND MAY NOT BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF PINNACLE ENGINEERING GROUP, LLC



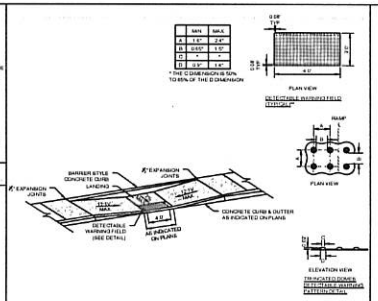
TAPER CURB HEAD



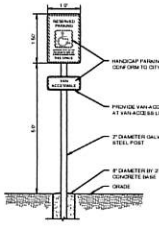
CONCRETE SIDEWALK



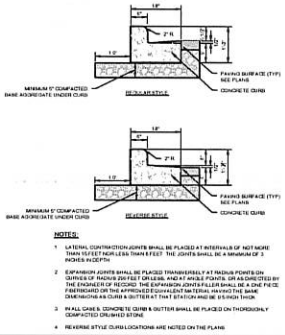
INTEGRAL CURB AND SIDEWALK



TYPICAL ACCESSIBLE RAMP - SPLIT



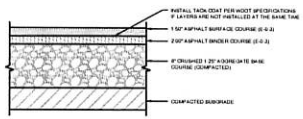
ADA SIGN



NOTES:

1. LATERAL CONTRACTION JOINTS SHALL BE PLACED AT INTERVALS OF NOT MORE THAN 15 FEET NOR LESS THAN 6 FEET. THE JOINTS SHALL BE A MINIMUM OF 3 INCHES IN DEPTH.
2. EXPANSION JOINTS SHALL BE PLACED TRANSVERSELY AT RADIUS POINTS ON CURVES OF RADIUS 200 FEET OR LESS, AND AT WYE POINTS, OR AS DIRECTED BY THE ENGINEER OF RECORD. THE EXPANSION JOINTS FILLER SHALL BE A ONE PIECE MATERIAL FOR THE FULL DEPTH OF THE CONCRETE PLUS AN EXTRA THE SAME DIMENSIONS FOR CURB & GUTTER AT LEAST 6 STATION AND BE 3/4 INCH THICK.
3. IN ALL CASE, CONCRETE CURB & GUTTER SHALL BE PLACED ON THOROUGHLY COMPACTED CRUSHED STONE.
4. REVERSE STYLE CURB LOCATIONS ARE NOTED ON THE PLANS.

18" VERTICAL FACE CURB



REGULAR DUTY PAVEMENT SECTION

THESE PLANS AND DESIGNS ARE COPYRIGHTED AND MAY NOT BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF PINNACLE ENGINEERING GROUP, LLC

DRAFTED: BRP DESIGNED: NRA REVIEWED: JDP

PLAN | DESIGN | DELIVER
www.pinnacle-engr.com
PINNACLE ENGINEERING GROUP
ENGINEERING | NATURAL RESOURCES | SURVEYING
WISCONSIN OFFICE:
15650 W. BLUEMOUND ROAD
BROOKFIELD, WI 53005
(262) 754 4888

GRAFTON MIXED USE

GRAFTON, WI

CONSTRUCTION DETAILS & SPECIFICATIONS

REVISIONS

PEG JOB No. 15-0.00
PEG PM ABK
START DATE 02/02/16
SCALE NTS

SHEET
C-11
C-11

CONSTRUCTION DETAILS & SPECIFICATIONS

www.pinnacle-engr.com