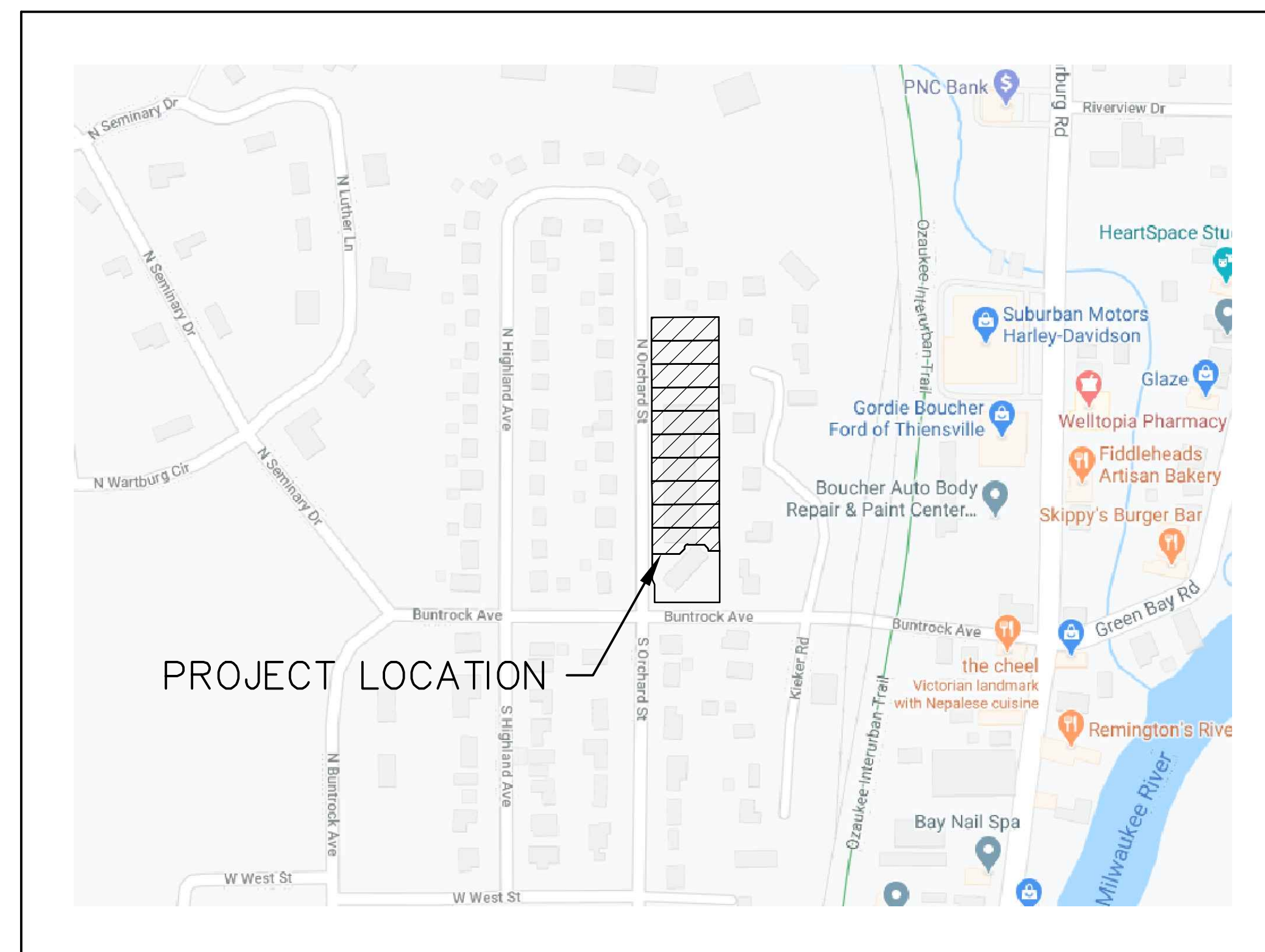


CONSTRUCTION PLANS FOR ORCHARD STREET SUBDIVISION VILLAGE OF THIENSVILLE, WISCONSIN

VICINITY MAP



LEGEND (PROPOSED FEATURES)

- TREE REMOVAL
- EXISTING CONCRETE PAVEMENT TO BE REMOVED
- EXISTING ASPHALT PAVEMENT TO BE REMOVED
- EXISTING GRAVEL TO BE REMOVED
- EXISTING BUILDING/STRUCTURE TO BE REMOVED
- SAWCUT LINE
- PROPOSED PROPERTY LINE
- PROPOSED SITE LIGHTING (DESIGNED BY OTHERS, FOR REFERENCE ONLY)
- MONUMENT SIGNS (CONSTRUCTION DETAILS BY OTHERS)
- SIGN
- HEAVY-DUTY CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- HEAVY-DUTY ASPHALT PAVEMENT
- STANDARD-DUTY ASPHALT PAVEMENT
- COLORED AND STAMPED CONCRETE
-
-
- PROPOSED ACCESSIBLE PAVEMENT MARKING
- VAN ACCESSIBLE STALL
- PROPOSED TYPE 3 CURB RAMP (SEE DETAIL SHEET, NOTE LINEWORK ON PLAN IS SYMBOLIC ONLY.)
- PROPOSED TYPE 3A CURB RAMP (SEE DETAIL SHEET, NOTE LINEWORK ON PLAN IS SYMBOLIC ONLY.)
- PROPOSED TYPE 4 CURB RAMP (SEE DETAIL SHEET, NOTE LINEWORK ON PLAN IS SYMBOLIC ONLY.)
- PROPOSED TYPE 4A CURB RAMP (SEE DETAIL SHEET, NOTE LINEWORK ON PLAN IS SYMBOLIC ONLY.)
- PROPOSED TYPE 7 CURB RAMP (SEE DETAIL SHEET, NOTE LINEWORK ON PLAN IS SYMBOLIC ONLY.)
- DOOR
- STRUCTURAL RETAINING WALL - (DESIGNED BY OTHERS)
- PROPOSED 0.5-FOOT GRADE CONTOUR (ONLY USED WHEN CRITICAL)
- PROPOSED 1-FOOT GRADE CONTOUR
- PROPOSED 5-FOOT GRADE CONTOUR
- PROPOSED SPOT GRADE
- PROPOSED TOP OF CURB
- DENOTES PROPOSED GARAGE FLOOR GRADE @ THRESHOLD
- IF A SECOND ELEVATION IS GIVEN, DENOTES GROUND LEVEL FOR LOOK OUT OR BASEMENT SLAB GRADE FOR WALK OUT.
- PROPOSED EROSION CONTROL BALE
- TEMPORARY DITCH CHECK
- PROPOSED SILT FENCE
- PROPOSED STRAW WATTLE
- PROPOSED TEMPORARY DIVERSION SWALE & BERM
- PROPOSED LEVEL SPREADER
- PROPOSED STONE TRACKING MAT
- PROPOSED PERMANENT TURF REINFORCEMENT MAT
- EROSION CONTROL BLANKET
- PROPOSED RIPRAP
- PROPOSED GAS LINE
- PROPOSED ELECTRIC LINE
- PROPOSED TELEPHONE LINE
- PROPOSED WATER MAIN
- PROPOSED STORM SEWER
- PROPOSED SANITARY SEWER
- PROPOSED FIRE DEPARTMENT CONNECTION
- PROPOSED WATER VALVE
- PROPOSED FIRE HYDRANT
- PROPOSED INLET/ COVER
- PROPOSED STORM MANHOLE
- PROPOSED AREA DRAIN
- PROPOSED SANITARY MANHOLE

LEGEND

- () INDICATES RECORDED DIMENSION WHERE DIFFERENT FROM ACTUAL MEASUREMENT
- OR SECTION OR 1/4 SECTION CORNER AS DESCRIBED
-
-
- BOLLARD
- SOIL BORING/MONITORING WELL
- FLAGPOLE
- MAILBOX
- SIGN
- BILLBOARD
- AIR CONDITIONER
- CONTROL BOX
- TRAFFIC SIGNAL
- RAILROAD CROSSING SIGNAL
- CABLE PEDESTAL
- POWER POLE
- GUY WIRE
- LIGHT POLE
- SPOT/YARD/PEDESTAL LIGHT
- HANDICAPPED PARKING
- ELECTRIC MANHOLE
- ELECTRIC PEDESTAL
- ELECTRIC METER
- ELECTRIC TRANSFORMER
- TELEPHONE MANHOLE
- TELEPHONE PEDESTAL
- MARKED FIBER OPTIC
- GAS VALVE
- GAS METER
- GAS WARNING SIGN
- ROUND INLET
- SQUARE INLET
- STORM SEWER END SECTION
- SANITARY MANHOLE
- SANITARY CLEANOUT OR SEPTIC VENT
- SANITARY INTERCEPTOR MANHOLE
- MISCELLANEOUS MANHOLE
- WATER VALVE
- HYDRANT
- WATER SERVICE CURB STOP
- WATER MANHOLE
- WELL
- WATER SURFACE
- WETLANDS FLAG
- MARSH
- CONIFEROUS TREE
- DECIDUOUS TREE
- SHRUB
- EDGE OF TREES
- SANITARY SEWER
- STORM SEWER
- WATERMAIN
- MARKED GAS MAIN
- MARKED ELECTRIC
- OVERHEAD WIRES
- BUREAU ELEC. SERV.
- MARKED TELEPHONE
- MARKED CABLE TV LINE
- MARKED FIBER OPTIC
- INDICATES EXISTING CONTOUR ELEVATION
- INDICATES EXISTING SPOT ELEVATION
- EXISTING PROPERTY LINE
- EXISTING EASEMENT LINE

SHEET NO.

- C000
- C100
- C101
- C200
- C301
- C302

PLAN INDEX

DESCRIPTION

- TITLE SHEET
- OVERALL UTILITY PLAN
- WATER MAIN & SANITARY SEWER PLAN & PROFILE
- PAVING PLAN
- SITE DETAILS
- SPECIFICATIONS

PLAN DATE: 03/24/2020

REVISIONS	ISSUE DATE	SHEET NO.'S	ISSUED FOR:
-	--	--	--

ENGINEER:

raSmith
CREATIVITY BEYOND ENGINEERING

16745 W. Bluemound Road
Brookfield, WI 53005-5938
(262) 781-1000
rasmith.com

RAS PROJECT: 3200014
CONTACT: DAVID J. CLEARY, P.E.

OWNER/DEVELOPER:

BONNILAKE REAL ESTATE, LLC
CONTACT: FRED BERSCH
520 WEST BONNIWELL ROAD
MEQUON, WI 53097
PH.: 414-940-9912

COMMUNITY:

VILLAGE OF THIENSVILLE
CONTACT: ANDY LAFOND
DIRECTOR OF PUBLIC WORKS
250 ELM STREET
THIENSVILLE, WI 53092
PH.: 262-242-3720

BENCHMARKS:

N. FLANGE BOLT ON HYDRANT,
WEST SIDE OF NORTH ORCHARD STREET
227' NORTH OF BUNTROCK AVENUE
ELEV = 703.98

N. FLANGE BOLT ON HYDRANT,
WEST SIDE OF NORTH ORCHARD STREET
652' NORTH OF BUNTROCK AVENUE
ELEV = 701.94

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Brookfield, WI | Milwaukee, WI | Appleton, WI | Madison, WI | Cedarburg, WI
Mount Pleasant, WI | Naperville, IL | Irvine, CA

ORCHARD STREET SUBDIVISION
VILLAGE OF THIENSVILLE, WISCONSIN

TITLE SHEET

PRELIMINARY
NOT FOR
CONSTRUCTION

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R.A. Smith, Inc.

DATE: 03/24/2020

SCALE: NO SCALE

JOB NO. 3200014

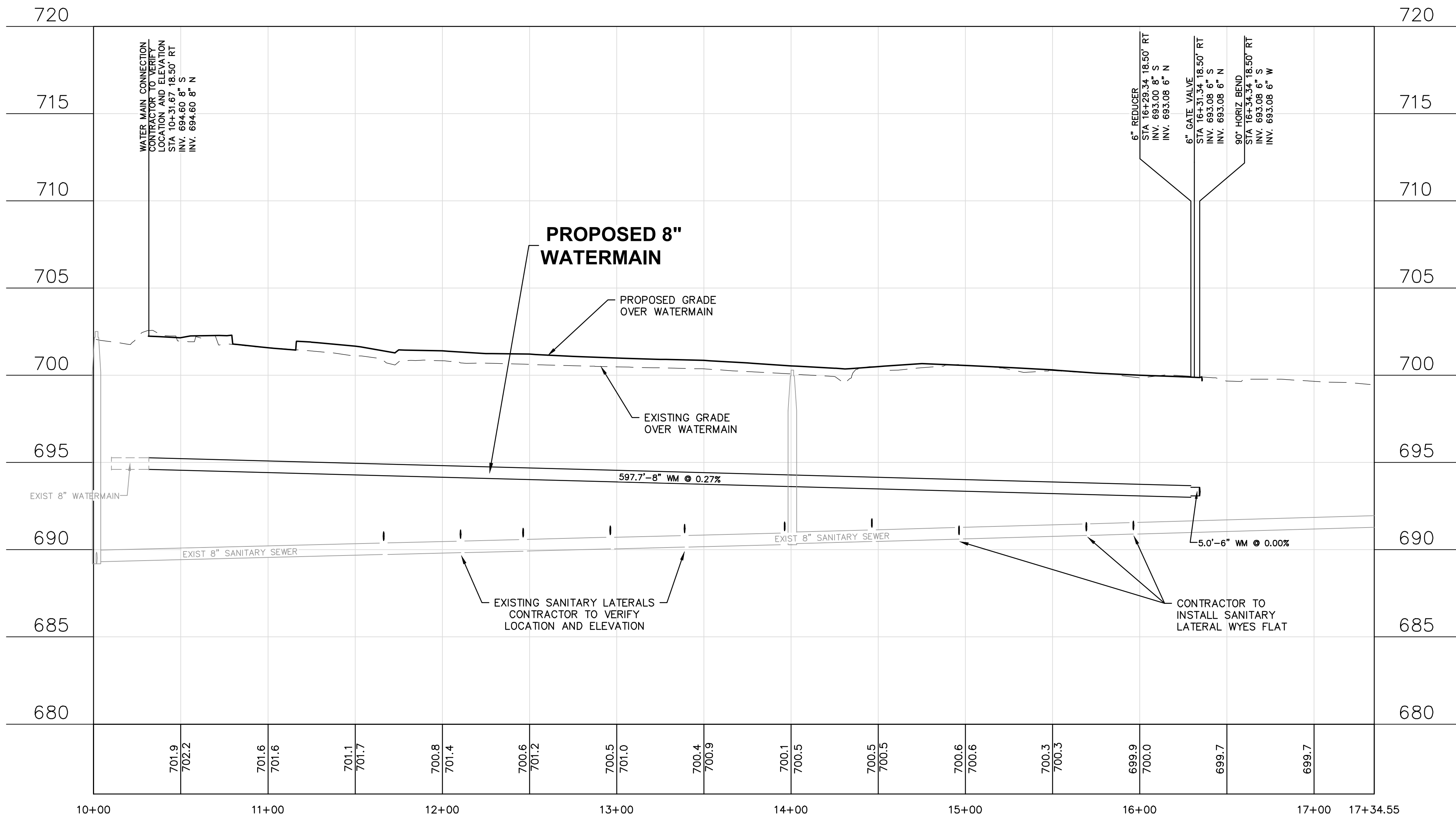
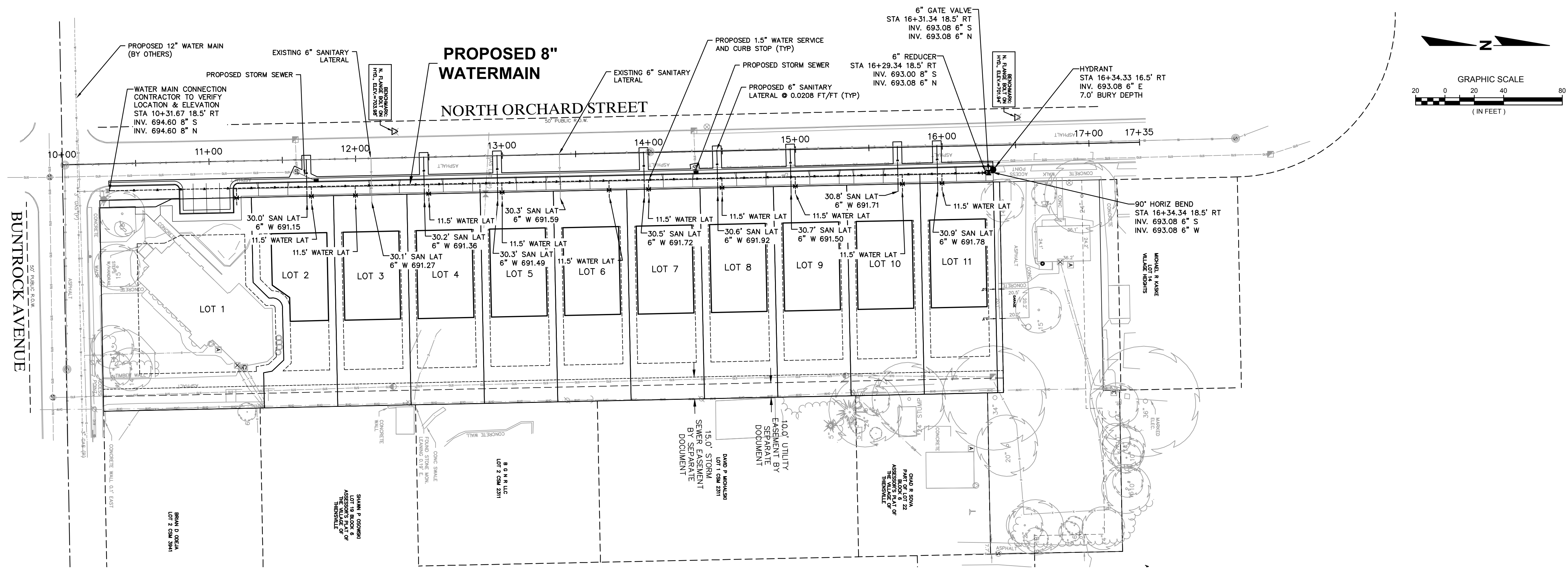
PROJECT MANAGER:
DAVID J. CLEARY, P.E.

DESIGNED BY: DJM

CHECKED BY: DJC

SHEET NUMBER

C000



THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS AS SHOWN ON THIS PLAN ARE APPROXIMATE. THERE MAY BE OTHER UNDERGROUND UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

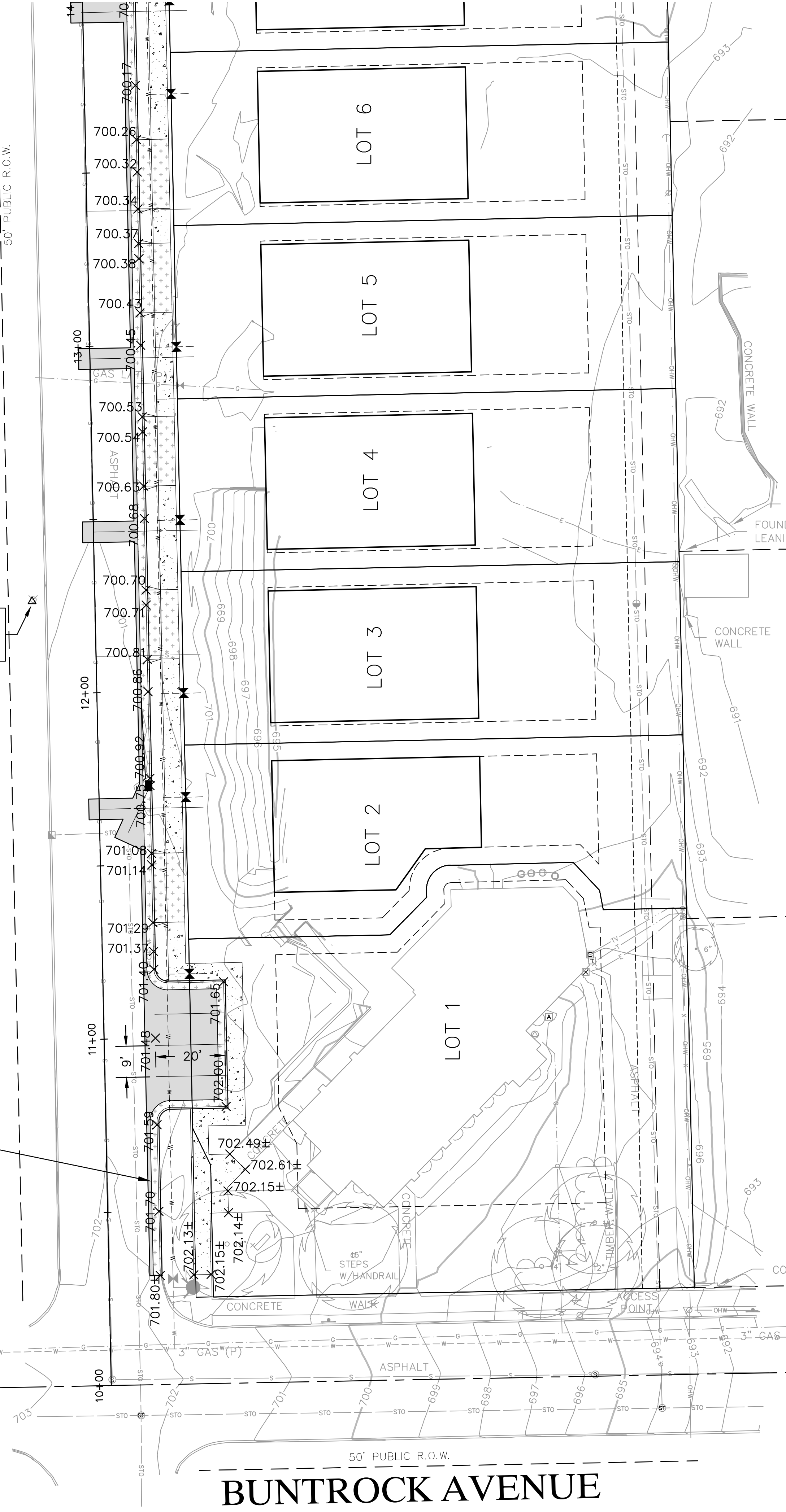


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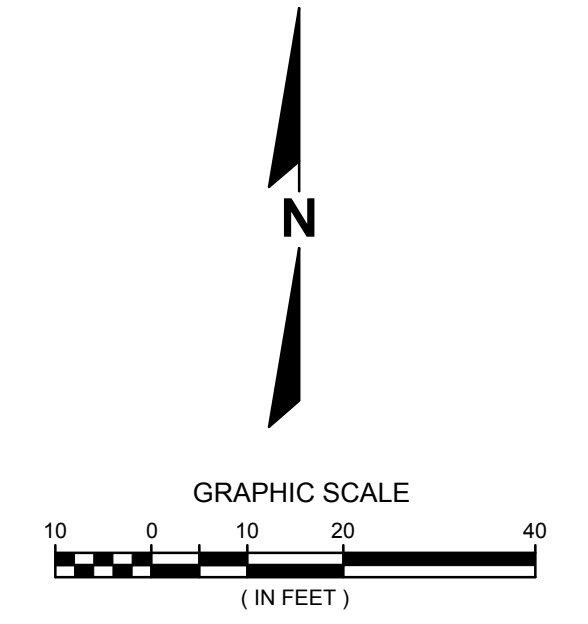
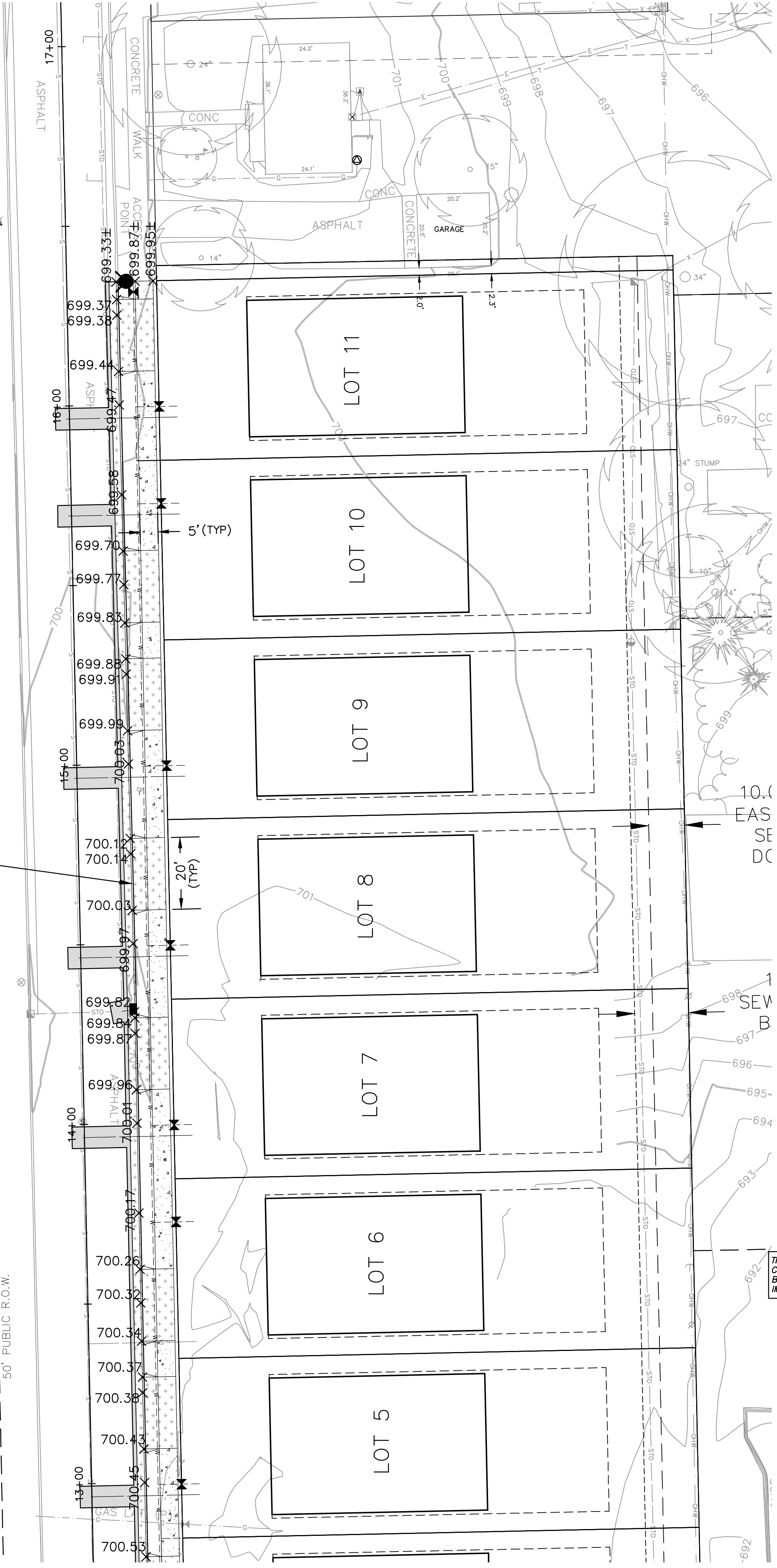
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DESCRIPTION	
DATE	
<p>16745 W. Bluemound Road Brookfield, WI 53005-5938 (262) 781-1000 rasmith.com</p> <p>raSmith CREATIVITY BEYOND ENGINEERING</p> <p>Brookfield, WI Milwaukee, WI Appleton, WI Madison, WI Cedarburg, WI Mount Pleasant, WI Napperville, IL Irvine, CA</p>	
<p>ORCHARD STREET SUBDIVISION VILLAGE OF THIENSVILLE, WISCONSIN</p> <p>WATER MAIN & SANITARY SEWER PLAN & PROFILE</p>	
<p>© COPYRIGHT 2020 R.A. Smith, Inc. DATE: 03/24/2020 SCALE: 1" = 40' JOB NO. 3200014 PROJECT MANAGER: DAVID J. CLEARY, P.E. DESIGNED BY: DJM CHECKED BY: DJC</p>	
<p>SHEET NUMBER</p> <p>C101</p>	

NORTH ORCHARD STREET



27TH ORCHARD STREET



NOTE:
1. ALL SPOT GRADES ARE FINISHED GRADE. ALL CURB SPOT GRADES ARE AT FLOWLINE OF CURB & GUTTER.

THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS AS SHOWN ON THIS PLAN ARE APPROXIMATE. THERE MAY BE OTHER UNDERGROUND UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

THE CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR THE COMPUTATIONS OF ALL GRADING QUANTITIES AND FOR THE ACTUAL LAND BALANCE, INCLUDING UTILITY TRENCH SPOIL. THE CONTRACTOR SHALL IMPORT OR EXPORT MATERIAL AS NECESSARY TO COMPLETE THE PROJECT.



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(262) 781-1000
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Brookfield, WI | Milwaukee, WI | Appleton, WI | Madison, WI | Cedarburg, WI
Mount Pleasant, WI | Napperville, IL | Irvine, CA

ORCHARD STREET SUBDIVISION
VILLAGE OF THIENSVILLE, WISCONSIN

PAVING PLAN

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R.A. Smith, Inc.
DATE: 03/24/2020
SCALE: 1" = 20'
JOB NO. 3200014
PROJECT MANAGER:
DAVID J. CLEARY, P.E.
DESIGNED BY: DJM
CHECKED BY: DJC

SHEET NUMBER
C200

DIVISION 1 – GENERAL REQUIREMENTS

01 41 00 – REGULATORY REQUIREMENTS

- THE LATEST EDITIONS OF THE FOLLOWING DOCUMENTS AND ANY SUPPLEMENTS THERETO, SHALL GOVERN ALL CONSTRUCTION ITEMS ON THIS PLAN UNLESS OTHERWISE NOTED:
 - WISCONSIN DEPARTMENT OF NATURAL RESOURCES (WDNR) STORM WATER TECHNICAL STANDARDS
 - WISCONSIN EROSION CONTROL ACCEPTABILITY LIST
 - STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN (SSSWCW)
 - WISCONSIN ADMINISTRATIVE CODE, SECTIONS SPS 382-387
 - WISCONSIN DEPARTMENT OF TRANSPORTATION (WISDOT) STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION
 - FEDERAL HIGHWAY ADMINISTRATION MANUAL UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)
 - WISCONSIN AESTHETIC TRAFFIC CONTROL DEVICES (WMTD)
 - UNITED STATES DEPARTMENT OF JUSTICE ADA STANDARDS
 - UNITED STATES DEPARTMENT OF TRANSPORTATION ADA STANDARDS FOR TRANSPORTATION FACILITIES
 - MUNICIPAL STANDARDS
 - COUNTY DEVELOPMENT STANDARDS
- THE OWNER, ENGINEER AND MUNICIPALITY SHALL BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF PERFORMING ANY CONSTRUCTION ACTIVITIES.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING COPIES OF ALL PERMITS AND FOR ABIDING BY ALL PERMIT REQUIREMENTS AND RESTRICTIONS.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL, STATE, AND LOCAL SAFETY REQUIREMENTS TOGETHER WITH EXERCISING PRECAUTIONS AT ALL TIMES FOR THE PROTECTION OF PERSONS (INCLUDING EMPLOYEES) AND PROPERTY. IT IS ALSO THE RESPONSIBILITY OF THE CONTRACTOR TO INITIATE, MAINTAIN, AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS, AND PROGRAMS IN CONNECTION WITH THE WORK.
- SHOP DRAWINGS AND/OR MANUFACTURER'S PRODUCT DATA SUBMITTALS ARE REQUIRED ONLY IF THE PRODUCT OR METHOD OF CONSTRUCTION IS DIFFERENT FROM THAT SPECIFIED OR IF REQUIRED BY THE MUNICIPAL ENGINEER.
 - ALL DOCUMENTS SUBMITTED FOR REVIEW SHALL HAVE THE SPECIFIC MATERIAL, PART, SIZE, ETC. HIGHLIGHTED IN SOME FASHION. EXAMPLE: A FITTING CUT SHALL BE IDENTIFIED BY THE FITTING SIZE, BENDS, HIGHLIGHT THE PRESSURE CLASS & SIZE TO BE USED ON PROJECT. ALL SUBMITTALS NOT PROPERLY IDENTIFYING THE SPECIFIC MATERIAL BEING USED WILL BE REJECTED.
 - CONTRACTOR SHALL SUBMIT A PDF COPY AND AN EXPLANATION AS TO HOW THE SUBSTITUTION MEETS THE PROPOSED DESIGN (PRODUCT SPECIFICATION SHEETS WITHOUT EXPLANATION WILL NOT BE ACCEPTED) TO THE OWNER'S REPRESENTATIVE OR ENGINEER FOR REVIEW AND APPROVAL. THE CONTRACTOR SHALL NOT PROCEED UNTIL THE OWNER'S APPROVAL IS GIVEN. IN PROJECT SCHEDULING CONTRACTOR SHALL ACCOUNT FOR 5 WORKING DAYS FOR SUBMITTAL REVIEW. IN THE EVENT SUCH SUBSTITUTION IS APPROVED, THE OWNER WILL REQUIRE FROM THE CONTRACTOR A CREDITED DEDUCTION FROM THE CONTRACT AMOUNT EQUAL TO ANY SAVINGS IN MATERIAL COST RESULTING FROM USE OF THE SUBSTITUTION.
- THE CONTRACTOR SHALL ASSUME COMPLETE AND SOLE RESPONSIBILITY FOR THE QUALITY OF WORK. IF CHANGES OR ADJUSTMENTS ARE RECOMMENDED BY THE CONTRACTOR, THEY MAY BE MADE ONLY UPON WRITTEN APPROVAL OF THE OWNER OR HIS REPRESENTATIVE.
 - ALL WORK SHALL BE DONE IN COMPLIANCE WITH THE CONTRACT DOCUMENTS. THE OWNER OR HIS REPRESENTATIVE SHALL DECIDE ALL CHANGES WHICH ARISE AS TO THE QUALITY AND ACCEPTABILITY OF MATERIALS FURNISHED, WORK PERFORMED, AND WORKMANSHIP. INTERPRETATION OF THE PLANS AND SPECIFICATIONS HE SHALL DETERMINE THE AMOUNT OF WORK PERFORMED AND MATERIALS FURNISHED.
 - FAILURE OR NEGLIGENCE ON THE PART OF THE OWNER OR HIS REPRESENTATIVE TO CONDEMN OR REJECT SUBSTANDARD OR INFERIOR WORK OR MATERIALS SHALL NOT BE CONSTRUED TO IMPLY AN ACCEPTANCE OF SUCH WORK OR MATERIALS, IF IT BECOMES EVIDENT AT ANY TIME PRIOR TO THE FINAL ACCEPTANCE OF THE WORK BY THE OWNER. NEITHER SHALL IT BE CONSTRUED AS BARRING THE OWNER, AT ANY SUBSEQUENT TIME FROM THE RECOVERY OF DAMAGES OR OF SUCH A SUM OF MONEY AS MAY BE NEEDED TO BUILD ANEW ALL PORTIONS OF THE SUBSTANDARD OR INFERIOR MATERIALS OR REPAIRS WHEREEVER FOUND.
 - INSPECTORS EMPLOYED BY THE OWNER SHALL BE AUTHORIZED TO INSPECT ALL WORK DONE AND ALL MATERIAL FURNISHED. SUCH INSPECTION MAY EXTEND TO ALL OR ANY PART OF THE WORK AND TO THE PREPARATION, FABRICATION OR MANUFACTURE OF THE MATERIALS TO BE USED. THE INSPECTOR IS NOT AUTHORIZED TO REVOKE, ALTER OR WAIVE ANY REQUIREMENTS OF THE SPECIFICATIONS, NOR IS HE AUTHORIZED TO APPROVE OR ACCEPT ANY PORTION OF THE WORK. HE SHALL NOT BE CONSTRUED AS BINDING THE ENGINEER IN ANY WAY OR RELASING THE CONTRACTOR FROM FULFILLING ANY OF THE TERMS OF THE CONTRACT.
 - ALL MATERIALS AND EACH PART OF DETAIL OF THE WORK SHALL BE SUBJECT AT ALL TIMES TO INSPECTION BY THE OWNER OR HIS AUTHORIZED REPRESENTATIVE OR THE AUTHORITY HAVING JURISDICTION AND THE CONTRACTOR WILL BE HELD STRICTLY TO THE TRUE INTENT OF THE SPECIFICATIONS IN REGARD TO QUALITY OF MATERIALS, WORKMANSHIP, AND THE DILIGENT EXECUTION OF THE CONTRACT. SUCH INSPECTION MAY INCLUDE MILL, PLANT OR SHOP INSPECTION, AND ANY MATERIAL FURNISHED UNDER THESE SPECIFICATIONS IS SUBJECT TO SUCH INSPECTION. THE OWNER OR HIS REPRESENTATIVES SHALL BE ALLOWED ACCESS TO ALL PART OF THE WORK, AND SHALL BE FURNISHED WITH SUCH INFORMATION BY THE CONTRACTOR AS IS DETERMINED BY THE OWNER OR HIS REPRESENTATIVE, TO MAKE A COMPLETE AND DETAILED INSPECTION.
 - ALL WORKMANSHIP SHALL CONFORM TO THE BEST STANDARD PRACTICE. UNLESS OTHERWISE SPECIFIED, THE SPECIFICATIONS OR RECOGNIZED ASSOCIATION OF MANUFACTURERS AND CONTRACTORS OR INDUSTRIAL MANUFACTURERS SHALL BE USED AS GUIDES FOR THE STANDARDS OF WORKMANSHIP.
 - ALL EXPOSED ITEMS OF WORK SHALL PRESENT A NEAT WORKMANLIKE APPEARANCE AND SHALL BE AS TRUE TO SHAPE AND ALIGNMENT AS POSSIBLE TO OBTAIN WITH MEASURING OR LEVELING INSTRUMENTS GENERALLY USED IN THE RESPECTIVE TYPES OF WORK. ITEMS OF WORK SHALL BE SOUND AND FULLY PROTECTED AGAINST DAMAGE AND PREMATURE DETERIORATION. IT IS SPECIFICALLY UNDERSTOOD THAT IN ALL QUESTIONS OF QUALITY AND ACCEPTABILITY OF WORKMANSHIP, THE CONTRACTOR AGREES TO ABIDE BY THE DECISION OF THE OWNER OR HIS REPRESENTATIVE.
 - ALL MATERIALS AND WORKMANSHIP NOT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS SHALL BE CONSIDERED AS DEFECTIVE AND SUCH MATERIALS, WHETHER IN PLACE OR NOT, SHALL BE REJECTED AND SHALL BE REMOVED FROM THE WORK BY THE CONTRACTOR AT HIS EXPENSE. UPON FAILURE ON THE PART OF THE CONTRACTOR TO COMPLY WITH ANY ORDER OF THE OWNER RELATIVE TO THE PROVISIONS OF THIS ARTICLE, THE OWNER SHALL HAVE THE AUTHORITY TO REMOVE AND REPLACE SUCH DEFECTIVE MATERIAL AND TO DEDUCT THE COST OF REMOVAL AND REPLACEMENT FROM ANY MONIES DUE OR WHICH MAY BECOME DUE TO THE CONTRACTOR.
 - THE CONTRACTOR SHALL KEEP A LEGIBLE COPY OF THE PLANS, SPECIFICATIONS, AND ALL PERMITS AT THE SITE OF THE WORK AT ALL TIMES. AT THE COMPLETION OF THE WORK AND PRIOR TO FINAL PAYMENT, THE CONTRACTOR SHALL PROVIDE THE OWNER OR HIS REPRESENTATIVE WITH A MARKED-UP SET OF DRAWINGS SHOWING ALL CHANGES OR VARIATIONS FROM THE ORIGINAL DRAWINGS. THESE CHANGES SHALL BE MADE ON A SET OF HARD DRAWINGS NOT FROM MEMORY WHEN THE WORK IS DONE. THIS SET OF DRAWINGS SHOULD BE KEPT CLEAN IN A LOCATION AT THE SITE WHERE THE OWNER OR HIS REPRESENTATIVE MAY EXAMINE THEM.
 - THE MARKED-UP DRAWINGS SHALL BE ACCURATE. ARBITRARY MARKINGS ARE OF NO VALUE. CAREFUL MEASUREMENTS SHALL BE MADE TO LOCAL BACKGROUND EXTERIOR AND UNDERGROUND INTERIOR SEWERS, GAS LINES, WATER LINES, ELECTRICAL CONDUIT AND MISCELLANEOUS PIPING.
- CONTRACTOR IS RESPONSIBLE FOR ALL TRAFFIC CONTROL, TRAFFIC CONTROL PLANS AND PERMITTING FOR ALL WORK TO BE COMPLETED ONSITE OR IN THE PUBLIC RIGHT-OF-WAY.

01 70 00 – EXECUTION & CLOSEOUT REQUIREMENTS

- THE CONTRACTOR IS RESPONSIBLE FOR EXAMINING ALL EXISTING SITE CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION AND SHALL COMPARE WITH THIS PLAN.
- EXISTING UTILITY INFORMATION IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY, BASED ON BEST AVAILABLE PUBLIC RECORDS, AS-BUILT DRAWINGS, AND FIELD OBSERVATIONS. NO RESPONSIBILITY IS ASSUMED BY THE OWNER OR ENGINEER FOR ACCURACY OR COMPLETENESS. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATION AS TO THE TYPE AND NATURE OF EXISTING UTILITIES, AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.
- THE CONTRACTOR SHALL VERIFY ALL LOCATIONS, ELEVATIONS, AND SIZES OF EXISTING UTILITIES AND SHALL CHECK ALL PROPOSED UTILITY CONNECTIONS PRIOR TO PROCEEDING WITH ANY WORK. ANY CONFLICTS SHALL BE REPORTED TO THE ENGINEER SO THE DESIGNER MAY OCCUR IF NEEDED. COST OF REPLACEMENT OR REPAIR OF EXISTING UTILITIES DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATIONS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING SOIL CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. A GEOTECHNICAL REPORT MAY BE AVAILABLE FROM THE OWNER. THE CONTRACTOR SHALL ABIDE BY THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT AND SUBSEQUENT RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER DURING CONSTRUCTION.
- THE CONTRACTOR SHALL FIELD VERIFY ELEVATIONS OF THE BENCHMARKS AND HORIZONTAL CONTROL. BY REFERENCING SHOWN COORDINATES TO KNOWN PROPERTY LINES, AND SHALL NOTIFY THE ENGINEER OF DISCREPANCIES IN EITHER VERTICAL OR HORIZONTAL CONTROL PRIOR TO PROCEEDING WITH ANY WORK.
- SURVEY BENCHMARKS AND CONTROL POINTS SHALL BE MAINTAINED AND PROTECTED FROM DISTURBANCE.
- PROPERTY CORNERS SHALL BE CAREFULLY PROTECTED AT ALL TIMES. PROPERTY MONUMENTS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- ANY ADJACENT PROPERTIES OR ROAD RIGHT-OF-WAYS WHICH ARE DAMAGED DURING CONSTRUCTION SHALL BE RESTORED BY THE CONTRACTOR. THE COST OF RESTORATION IS CONSIDERED INCIDENTAL AND SHALL BE INCLUDED.
- PUBLIC ROADS SHALL NOT BE FULLY CLOSED TO TRAFFIC AT ANY TIME. ALL INGRESS AND EGRESS TRAFFIC TO THE PROJECT SITE SHALL BE LIMITED TO THE CONSTRUCTION ENTRANCE.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR DETERMINING QUANTITIES, SHALL BID ON THEIR OWN ESTIMATE OF THE WORK REQUIRED, AND SHALL NOT RELY ON THE ENGINEER'S ESTIMATE.
- REQUESTS FOR CLARIFICATION WILL BE INTERPRETED BY THE OWNER/ENGINEER PRIOR TO AWARD OF CONTRACT, AND WHEN NECESSARY, OFFICIAL WRITTEN RESPONSES WILL BE ISSUED. OFFICIAL WRITTEN RESPONSES SHALL BE BINDING TO THE WORK. IN NO WAY SHALL VERBAL DIALOGUE CONSTITUTE OFFICIAL RESPONSE.
- SHOULD ANY DISCREPANCIES BE DISCOVERED BY THE CONTRACTOR AFTER AWARD OF CONTRACT, NOTIFY OWNER/ENGINEER IN WRITING IMMEDIATELY. CONSTRUCTION OF ITEMS AFFECTED BY THE DISCREPANCIES SHALL NOT COMMENCE OR CONTINUE UNTIL AN OFFICIAL WRITTEN RESPONSE IS ISSUED.
- ALL WORK SHALL BE GUARANTEED BY THE CONTRACTOR FOR A MINIMUM PERIOD OF 12 MONTHS FROM THE DATE OF FINAL ACCEPTANCE. THIS GUARANTEE SHALL INCLUDE ALL DEFECTS IN MATERIALS AND WORKMANSHIP.
- 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.

DIVISION 31 – EARTHWORK

31 10 00 – SITE CLEARING & DEMOLITION

- WORK SHALL CONSIST OF DEMOLITION, ABANDONMENT, AND REMOVAL OF EXISTING FOUNDATIONS, WALLS, SLABS, FENCES, PIPING, PAVEMENTS, AND OTHER MANMADE ITEMS INTERFERING WITH NEW CONSTRUCTION. WORK SHALL ALSO CONSIST OF CLEARING AND GRUBBING OF TREES, SHRUBS, VEGETATION, ROOTS, STUMPS, RUBBISH, AND OTHER OBSTACLES TO WATER INTERFERING WITH NEW CONSTRUCTION.
- ALL ITEMS SHALL INCLUDE ALL NECESSARY MATERIALS AND LABOR TO COMPLETE THE ITEM IN PLACE.
- CALL 811 TO NOTIFY UTILITY PROVIDERS AND REQUEST FIELD LOCATION OF EXISTING UTILITIES WITHIN PROJECT LIMITS PRIOR TO ANY CONSTRUCTION RELATED ACTIVITIES.
- INSTALL PERIMETER FENCING AS INDICATED PRIOR TO COMMENCING ANY CONSTRUCTION RELATED ACTIVITY.
- CLEARLY IDENTIFY ALL VEGETATION TO BE PRESERVED AND/OR RELOCATED PRIOR TO CLEARING AND GRUBBING.
- PROTECT EXISTING IMPROVEMENTS TO REMAIN DURING CONSTRUCTION. ANY DAMAGED IMPROVEMENTS SHALL BE RESTORED TO ORIGINAL CONDITION, OR AS OTHERWISE ACCEPTABLE TO THE OWNER.
- REMOVE EXISTING ABOVE-GRADE AND BELOW-GRADE IMPROVEMENTS AS INDICATED AND AS NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS.
- SAW/CUT ALL PAVEMENT TO BE REMOVED IN STRAIGHT LINES TO FULL DEPTH.
- DEMOLISH CONCRETE AND MASONRY IN SMALL SECTIONS. BREAK UP CONCRETE SLABS THAT ARE 2 FEET OR MORE BELOW PROPOSED SUBGRADE TO PERMIT DRAINAGE.
- DISCONNECT AND SEAL/CAP EXISTING UTILITIES TO BE REMOVED, RELOCATED, OR ABANDONED IN ACCORDANCE WITH REQUIREMENTS OF UTILITY PROVIDERS.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING OWNERSHIP OF AND COORDINATING NECESSARY REMOVAL AND/OR RELOCATION OF ALL EXISTING UTILITIES WITHIN THE PROJECT LIMITS.
- DO NOT INTERRUPT UTILITY SERVICE TO EXISTING FACILITIES UNLESS PERMITTED BY THE OWNER.
- VOIDS LEFT BY REMOVALS SHALL BE LEVELED TO PREVENT PONDING OF WATER.
- REMOVE AND LEGALLY DISPOSE OF DEMOLISHED MATERIALS, TRASH, AND DEBRIS FROM THE PROJECT SITE. RUBBISH, TRASH, GARBAGE, AND LITTER SHALL BE PLACED IN SEALED CONTAINERS THROUGHOUT CONSTRUCTION.

31 20 00 – EARTH MOVING

- WORK SHALL CONSIST OF STRIPPING AND STORAGE OF TOPSOIL, EXCAVATION, EMBANKMENT, IMPORTING OR EXPORTING MATERIAL TO ACHIEVE LAND BALANCE, COMPACTION, FINISH GRADING, SUBGRADE PREPARATION, AND REPLACEMENT OF TOPSOIL.
- ALL ITEMS SHALL INCLUDE ALL NECESSARY MATERIALS AND LABOR TO COMPLETE THE ITEM IN PLACE.
- ALL EARTHWORK SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT AND SUBSEQUENT RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER DURING CONSTRUCTION BASED ON FIELD CONDITIONS, AND THESE REQUIREMENTS. THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER SHALL GOVERN.
- EXCAVATION TO SUBGRADE REGARDLESS OF THE CHARACTER OF SURFACE AND SUBSURFACE CONDITIONS ENCOUNTERED. EXCAVATED MATERIAL MAY INCLUDE ROCK AND UNCLASSIFIED OBSTRUCTIONS, WHICH IS CONSIDERED INCIDENTAL AND SHALL BE INCLUDED IN THE WORK.
- EXISTING FOUNDATIONS, BUILDING REMNANTS, AND UNSATISFACTORY MATERIAL SHALL BE COMPLETELY REMOVED FROM WITHIN AND A MINIMUM OF 10 FEET BEYOND BUILDING PAD AREAS. ANY RELATED EXCAVATION SHALL BE BACKFILLED WITH COMPACTED ENGINEERED FILL MATERIAL.
- WISCONSIN SHALL BE REMOVED TO A MINIMUM OF 2 FEET BELOW PROPOSED SUBGRADE WITHIN GREENSPACE AND PAVEMENT AREAS. ANY RELATED EXCAVATION SHALL BE BACKFILLED WITH COMPACTED ENGINEERED FILL MATERIAL.
- AREAS SHALL BE GRADED TO WITHIN 1 INCH, MORE OR LESS, OF PROPOSED SUBGRADE. DEVIATIONS SHALL NOT BE CONSISTENT IN ONE DIRECTION. DISKING, HARROWING, AND AERATION TECHNIQUES SHALL BE USED TO DRY SUBGRADE PRIOR TO PROOF ROLLING.
- IN THE PRESENCE OF THE GEOTECHNICAL ENGINEER, PROF. ROLL SUBGRADE BELOW BUILDING PAD AND PAVEMENT AREAS DURING DRY WEATHER WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK WHERE COHESIVE SOILS ARE PREDOMINANT, AND WITH A SMOOTH DRUMMED VIBRATORY ROLLER WHERE GRANULAR SOILS ARE PREDOMINANT. SUBGRADE WHICH IS OBSERVED TO RUT OR DEFLECT EXCESSIVELY SHALL BE UNDERCUT IN ACCORDANCE WITH RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER. DO NOT PROOF ROLL WET OR SATURATED SUBGRADE.
- THE CONTRACTOR SHALL MAINTAIN POSITIVE SITE DRAINAGE THROUGHOUT CONSTRUCTION. THIS MAY INCLUDE EXCAVATION OF TEMPORARY DITCHES OR PUMPING TO ALLEVIATE WATER PONDING. SURFACE WATER AND GROUNDWATER SHALL BE PREVENTED FROM ENTERING EXCAVATIONS, PONDING OR PREPARED SUBGRADES, AND FLOODING PROJECT SITE AND/OR SURROUNDING AREAS.
- THE CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR ALL EARTHWORK COMPUTATIONS AND FOR ACTUAL LAND BALANCE, INCLUDING UTILITY TRENCH SOIL. THE CONTRACTOR SHALL IMPORT OR EXPORT MATERIAL AS NECESSARY TO COMPLETE THE PROJECT.
- DICTIONARY REPLACEMENT DEPTH SHALL BE AS CALLED OUT ON THE CIVIL OR LANDSCAPE PLANS, OR A MINIMUM OF FOUR INCHES IF NOT CALLED OUT ON LANDSCAPE PLAN.

31 25 00 – EROSION & SEDIMENTATION CONTROLS

- WORK SHALL CONSIST OF INSTALLATION OF TEMPORARY AND PERMANENT PRACTICES FOR SEDIMENTATION CONTROL, EROSION CONTROL, SLOPE PROTECTION, AND REMOVAL OF PRACTICES UPON FINAL SITE STABILIZATION.
- ALL ITEMS SHALL INCLUDE ALL NECESSARY MATERIALS AND LABOR TO COMPLETE THE ITEM IN PLACE.
- INSTALLATION AND MAINTENANCE OF PRACTICES SHALL BE IN ACCORDANCE WITH THE APPLICABLE WDNR TECHNICAL STANDARD, OR THE WISCONSIN CONSTRUCTION SITE BEST MANAGEMENT PRACTICE HANDBOOK IF A TECHNICAL STANDARD IS NOT AVAILABLE.
- ALL PRACTICES SHALL BE INSTALLED PRIOR TO COMMENCING ANY LAND DISTURBING CONSTRUCTION RELATED ACTIVITY. EARTHWORK ASSOCIATED WITH INSTALLATION OF PRACTICES MAY OCCUR CONCURRENTLY.
- ALL PRACTICES SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT AND WARRANTY PERIOD IN CONFORMANCE WITH PERMIT REQUIREMENTS.
- ALL PRACTICES SHALL BE ROUTINELY INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL GREATER THAN 0.5 INCHES. THE CONTRACTOR IS REQUIRED TO PERFORM INSPECTIONS, KEEP A LOG, AND CONDUCT REPAIRS AS NEEDED.
- ALL DISTURBED AREAS SHALL DRAIN TO A CONTROL PRACTICE AT ALL TIMES DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED. DEPENDING UPON HOW THE CONTRACTOR GRADES THE SITE, IT MAY BE NECESSARY TO INSTALL ADDITIONAL CONTROL PRACTICES IN VARIOUS LOCATIONS THROUGHOUT THE PROJECT SITE. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL CONTROL PRACTICES NECESSARY TO PREVENT EROSION AND SEDIMENTATION.
- ALL DISTURBED GROUND LEFT INACTIVE FOR 7 DAYS SHALL BE STABILIZED WITH A TEMPORARY SEED MIXTURE AND MULCH. THE TEMPORARY SEED MIXTURE SHALL BE IN ACCORDANCE WITH SECTION 630 OF WISDOT STANDARD SPECIFICATIONS. WINTER WHEAT OR RYE SHALL BE USED FOR TEMPORARY SEED AFTER SEPTMBER 15TH.
- DISTURBED AREAS THAT CAN NOT BE STABILIZED WITH A DENSE GROWTH OF VEGETATION DUE TO TEMPERATURE OR TIMING OF CONSTRUCTION SHALL BE STABILIZED BY APPLYING ANIONIC POLYACRYLAMIDE (PAM).
- ALL ACTIVITIES ON THE PROJECT SITE SHALL BE CONDUCTED IN A LOGICAL SEQUENCE TO MINIMIZE THE AREA OF BARE SOIL EXPOSED AT ANY ONE TIME.
- DUST GENERATED BY CONSTRUCTION RELATED ACTIVITIES SHALL BE MINIMIZED BY USE OF WATERING, CALCIUM CHLORIDE SURFACE TREATMENT, CONSTRUCTION SCHEDULING, OR OTHER APPROPRIATE MEASURES.
- THE SPECIFICATIONS TO THE CONTRACT SHALL BE PREPARED FOR DETAILING CONDITIONS BY HAVING APPROPRIATE PUMPS AND FILTER BAGS ONSITE. ALL WATER FROM CONSTRUCTION DETAHERING SHALL BE TREATED PRIOR TO DISCHARGE FROM THE PROJECT SITE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE CLEANLINESS OF THE PROJECT SITE AND PUBLIC ROADS DURING CONSTRUCTION. PUBLIC AREAS SHALL BE KEPT FREE OF SEDIMENT TRACKED FROM AREAS UNDER CONSTRUCTION BY DAILY SWEEPING OR OTHER APPROPRIATE MEASURES.
- FINAL STABILIZATION OF LANDSCAPED AREAS SHALL BE IN ACCORDANCE WITH THE APPROVED LANDSCAPE PLAN.
- ALL SEEDED AREAS SHALL BE FERTILIZED, RESEDED AS NECESSARY, AND MULCHED IN ACCORDANCE WITH THE APPROVED LANDSCAPE PLAN TO MAINTAIN A VIGOROUS DENSE VEGETATIVE COVER.

DIVISION 32 – EXTERIOR IMPROVEMENTS

32 12 00 – ASPHALT PAVING

- WORK SHALL CONSIST OF FINE GRADING SUBGRADE, EXCAVATION BELOW SUBGRADE (IF NECESSARY), PLACEMENT OF CRUSHED STONE BASE, INSTALLATION OF ASPHALT PAVEMENT MARKING, SIGNAGE, AND CLEANUP.
- ALL ITEMS SHALL INCLUDE ALL NECESSARY MATERIALS AND LABOR TO COMPLETE THE ITEM IN PLACE.
- CRUSHED STONE BASE SHALL BE IN ACCORDANCE WITH SECTION 305 OF WISDOT STANDARD SPECIFICATIONS.
- ASPHALTIC MATERIALS SHALL BE IN ACCORDANCE WITH SECTION 455 OF WISDOT STANDARD SPECIFICATIONS.
- ASPHALT SHALL BE PREPARED FOR DETAILING CONDITIONS BY HAVING APPROPRIATE PUMPS AND FILTER BAGS ONSITE.
- DO NOT CONDUCT ASPHALT PAVING IF ANY OF THE FOLLOWING CONDITIONS EXIST: CRUSHED STONE BASE IS WET OR EXCESSIVELY DAMP; TEMPERATURE IS BELOW 30 DEGREES FAHRENHEIT AT TIME OF BINDER COURSE INSTALLATION; TEMPERATURE HAS BEEN BELOW 35 DEGREES FAHRENHEIT WITHIN 12 HOURS PRIOR TO TACK COAT APPLICATION; TEMPERATURE IS BELOW 40 DEGREES FAHRENHEIT AT TIME OF SURFACE COURSE INSTALLATION.
- COMPACT ASPHALT IN ACCORDANCE WITH SECTION 450 OF WISDOT STANDARD SPECIFICATIONS. COMPACT ASPHALT TO PRODUCE THE THICKNESS INDICATED WITHIN PLUS/MINUS 1/4-INCH FOR BINDER COURSE, AND WITHIN PLUS 1/4-INCH FOR FINISH COURSE (NO MINUS).
- DRY TACK COAT SHALL BE APPLIED BETWEEN ASPHALT COURSES AT A MINIMUM RATE OF 0.25 GAL/SY.
- NO TRAFFIC SHALL BE ALLOWED ON ASPHALT AFTER FINAL ROLLING UNTIL IT HAS COOLED AND HARDENED.
- FINAL ASPHALT SURFACE SHALL BE WITHIN A 1/8-INCH TOLERANCE AS DETERMINED BY USING A 10-FOOT STRAIGHTEDGE APPLIED LONGITUDINALLY OR TRANSVERSELY REMOVE AND REPLACE ALL RAISED AND DEPRESSED AREAS EXCEEDING TOLERANCE.
- SLOPE NO GREATER THAN 2% IN ALL DIRECTIONS AT ADA PARKING STALLS AND ADJACENT UNLOADING AREAS IS REQUIRED. NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO COMMENCING WORK.
- A SLOPE NO GREATER THAN 5% ALONG THE LENGTH OF THE ACCESSIBLE ROUTE IS REQUIRED. A SLOPE NO GREATER THAN 2% ACROSS THE WIDTH OF THE ACCESSIBLE ROUTE IS REQUIRED. NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO COMMENCING WORK.

32 13 00 – CONCRETE PAVING

- WORK SHALL CONSIST OF FINE GRADING SUBGRADE, EXCAVATION BELOW SUBGRADE (IF NECESSARY), PLACEMENT OF CRUSHED STONE BASE, INSTALLATION OF CONCRETE, AND CLEANUP.
- ALL ITEMS SHALL INCLUDE ALL NECESSARY MATERIALS AND LABOR TO COMPLETE THE ITEM IN PLACE.
- CRUSHED STONE BASE SHALL BE IN ACCORDANCE WITH SECTION 305 OF WISDOT STANDARD SPECIFICATIONS.
- CONCRETE SHALL BE PREPARED FOR DETAILING CONDITIONS BY HAVING APPROPRIATE PUMPS AND FILTER BAGS ONSITE. CONCRETE SHALL BE COMPRESSIVE STRENGTH OF 4,000 PSI.
- AGGREGATE SHALL BE IN ACCORDANCE WITH SECTION 501 OF WISDOT STANDARD SPECIFICATIONS.
- WATER SHALL BE IN ACCORDANCE WITH SECTION 501 OF WISDOT STANDARD SPECIFICATIONS AND ASTM C84 / C94M.
- AIR-ENTRAINING SHALL BE IN ACCORDANCE WITH SECTION 501 OF WISDOT STANDARD SPECIFICATIONS AND ASTM C260.
- LIQUID CURING COMPOUND SHALL BE IN ACCORDANCE WITH SECTION 415 OF WISDOT STANDARD SPECIFICATIONS AND AASHTO M 148.
- CURBING SHALL BE IN ACCORDANCE WITH SECTION 601 OF WISDOT STANDARD SPECIFICATIONS.
- SIDEWALK AND PATIO SHALL BE IN ACCORDANCE WITH SECTION 602 OF WISDOT STANDARD SPECIFICATIONS.
- CONCRETE FORMS SHALL REMAIN IN PLACE AT LEAST 24 HOURS AFTER CONCRETE INSTALLATION AND SHALL BE CLEANED AFTER EACH USE. CONCRETE FORMS SHALL BE COATED WITH RELEASE AGENT TO ALLOW SEPARATION WITHOUT DAMAGE TO CONCRETE.
- CONSTRUCTION AND CONTRACTOR JOINTS SHALL BE IN ACCORDANCE WITH SECTION 415 OF WISDOT STANDARD SPECIFICATIONS. JOINT PATTERN SHALL FOLLOW ARCHITECTURAL PLANS IF AVAILABLE.
- ISOLATION JOINTS SHALL CONSIST OF PREFORMED JOINT FILLER STRIPS ABUTTING CURBING, INLETS, CATCH BASINS, MANHOLES, STRUCTURES, AND OTHER FIXED OBJECTS.
- EDGES OF CONCRETE PAVEMENT, CURBING, SIDEWALK, PATIOS, AND JOINTS SHALL BE TOOLED IN CONCRETE AFTER INITIAL FLOATING WITH AN EDGING TOOL TO A 1/4-INCH RADIUS. REPEAT TOOLING AFTER APPLYING SURFACE FINISHES AND ELIMINATE TOOL MARKS ON SURFACES.
- FINISH, CURE, AND PROTECT CURBING IN ACCORDANCE WITH SECTION 601 OF WISDOT STANDARD SPECIFICATIONS.
- FINISH (LIGHT BROOM), CURE, AND PROTECT SIDEWALK AND PATIOS IN ACCORDANCE WITH SECTION 602 OF WISDOT STANDARD SPECIFICATIONS.
- FINISH (ARTIFICIAL TURF DRAG), CURE, AND PROTECT VEHICULAR PAVEMENT AND PADS IN ACCORDANCE WITH SECTION 415 OF WISDOT STANDARD SPECIFICATIONS.
- MAINTAIN CONCRETE FREE OF STAINS, DISCOLORATION, DIRT, AND OTHER FOREIGN MATERIAL. SWEEP CONCRETE PRIOR TO SUBSTANTIAL COMPLETION INSPECTION.
- MAXIMUM DIFFERENCE BETWEEN CONCRETE SIDEWALKS AND ADJACENT PAVEMENT SURFACES SHALL NOT EXCEED 1/4-INCH VERTICAL.
- A SLOPE NO GREATER THAN 2% IN ALL DIRECTIONS AT ADA PARKING STALLS AND ADJACENT UNLOADING AREAS IS REQUIRED. NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO COMMENCING WORK.
- A SLOPE NO GREATER THAN 5% ALONG THE LENGTH OF THE ACCESSIBLE ROUTE IS REQUIRED. A SLOPE NO GREATER THAN 2% ACROSS THE WIDTH OF THE ACCESSIBLE ROUTE IS REQUIRED. NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO COMMENCING WORK.
- ALL HANDICAP ACCESSIBLE DRIVEWAYS REQUIRE AN EXTERIOR LANDING THAT IS A MINIMUM OF 5 FEET BY 5 FEET WITH A SLOPE NO GREATER THAN 2% IN ALL DIRECTIONS. NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO COMMENCING WORK.
- REMOVE AND REPLACE CONCRETE THAT IS BROKEN, DAMAGED, DEFECTIVE, OR DOES NOT COMPLY WITH THE REQUIREMENTS LISTED ABOVE.

32 17 00 – PAVEMENT MARKING & SIGNAGE

- WORK SHALL CONSIST OF INSTALLATION OF PARKING LOT STRIPING, DIRECTION ARROWS, HANDICAP ACCESSIBLE SYMBOLS AND SITE SIGNAGE.
- ALL ITEMS SHALL INCLUDE ALL NECESSARY MATERIALS AND LABOR TO COMPLETE THE ITEM IN PLACE.
- PAVEMENT MARKING PAINT SHALL BE IN ACCORDANCE WITH SECTION 646 OF WISDOT STANDARD SPECIFICATIONS AND WISDOT APPROVED PRODUCTS LIST. COLOR SHALL BE AS SPECIFIED UNLESS NOTED OTHERWISE ON THIS PLAN. MARKINGS SEPARATING OPPOSING TRAFFIC SHALL BE YELLOW.
- ALL MARKING LOT STRIPING SHALL BE 4-INCH WIDTH UNLESS NOTED OTHERWISE ON THIS PLAN.
- BARRICADE WORK AREA DURING INSTALLATION AND UNTIL PAVEMENT MARKING PAINT IS DRIED. PROTECT ADJACENT AREAS FROM RECEIVING PAINT.
- APPLY PAINT IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS TO PRODUCE MARKINGS AS INDICATED WITH UNIFORM, STRAIGHT EDGES.
- TEMPLATES SHALL BE PROFESSIONALLY MADE TO INDUSTRY STANDARDS.
- APPLY PAINT TO CLEAN AND DRY SURFACE, FREE FROM FROST, TO ENSURE PROPER BONDING.
- NOTIFY OWNER OF ANY UNSOUND CONDITIONS PRIOR TO COMMENCING WORK. APPLYING PAVEMENT MARKING PAINT CONSTITUTES CONTRACTOR'S ACCEPTANCE OF SURFACE AS SUITABLE FOR INSTALLATION.

DIVISION 33 – UTILITIES

33 10 00 – WATER DISTRIBUTION

- WORK SHALL CONSIST OF INSTALLATION AND TESTING OF THE WATER DISTRIBUTION SYSTEM AND ALL APPURTENANCES.
- ALL ITEMS SHALL INCLUDE ALL NECESSARY MATERIALS AND LABOR TO COMPLETE THE ITEM IN PLACE.
- ALL PUBLIC WATER DISTRIBUTION WORK SHALL BE IN ACCORDANCE WITH SSSWCW AND MUNICIPALITY DEVELOPMENT STANDARDS.
- ALL PRIVATE WATER DISTRIBUTION WORK SHALL BE IN ACCORDANCE WITH WISCONSIN ADMINISTRATIVE CODE AND MUNICIPALITY DEVELOPMENT STANDARDS.
- POLYVINYL CHLORIDE (PVC) PIPE SHALL BE SDR 18, CLASS 150 CONFORMING TO AWWA C900 WITH INTEGRAL ELASTOMERIC BELL AND SPOGOT JOINTS IN ACCORDANCE WITH SECTION 8.2.0 OF SSSWCW.
- DUCTILE IRON PIPE (DIP) SHALL BE CLASS 150 CONFORMING TO AWWA C151 WITH RUBBER GASKETED JOINTS IN ACCORDANCE WITH SECTION 8.18.0 OF SSSWCW.
- POLYETHYLENE TUBING SHALL BE SDR 9 IN ACCORDANCE WITH SECTION 8.2.4.0 OF SSSWCW AND CONFORM TO AWWA C901.
- COPPER TUBING SHALL BE TYPE "K" IN ACCORDANCE WITH SECTION 8.26.0 OF SSSWCW AND CONFORM TO ASTM B88.
- BALL VALVES SHALL BE IN ACCORDANCE WITH SECTION 8.30.0 OF SSSWCW AND CONFORM TO AWWA C800 AND ASTM B62.
- GATE VALVES SHALL BE IN ACCORDANCE WITH SECTION 8.27.0 OF SSSWCW AND CONFORM TO AWWA C500.
- BUTTERFLY VALVES SHALL BE IN ACCORDANCE WITH SECTION 8.28.0 OF SSSWCW AND CONFORM TO AWWA C504.
- VALVE BOXES SHALL BE IN ACCORDANCE WITH SECTION 8.29.0 OF SSSWCW AND CONFORM TO ASTM A48. VALVE BOXES SHALL BE SIZE OD, SCREW TYPE, 3 PIECE ASSEMBLY, WITH COVERS MARKED "WATER". ALL VALVE BOXES SHALL BE SET TO PROPOSED GRADE, TRULY VERTICAL, AND SUPPORTED BY USE OF ADAPTOR.
- HYDRANTS SHALL BE IN ACCORDANCE WITH SECTION 8.26.0 OF SSSWCW AND CONFORM TO AWWA C502. PUMPER NOZZLE SHALL BE PERPENDICULAR TO AND ORIENTED TOWARDS THE PAVEMENT. HYDRANTS SHALL BE ATTACHED BY MEANS OF TEE AND HAVE A GROUND LINE TO CENTER DISTANCE OF 18 TO 21 INCHES.
- FITTINGS SHALL BE CLASS 150 IN ACCORDANCE WITH SECTION 8.22.0 OF SSSWCW, CONFORMING TO AWWA C110, AND PROVIDED WITH MECHANICAL JOINTS.
- MECHANICAL JOINTS SHALL BE MADE WITH "COR TEN" NUTS AND BOLTS, OR CORROSION-RESISTANT EQUIVALENTS CONFORMING TO AWWA C111.
- POLYETHYLENE WRAP SHALL BE IN ACCORDANCE WITH SECTION 8.21.0 OF SSSWCW AND PROVIDED FOR ALL METAL PIPES AND FITTINGS.
- THRUST RESTRAINT SHALL BE IN ACCORDANCE WITH SECTION 4.31.3 OF SSSWCW AND PROVIDED FOR ALL BENDS, CAPS, PLUGS, AND TEES.
- TRENCH SECTION SHALL BE IN ACCORDANCE WITH FILE NO. 36 OF SSSWCW. MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE OUTSIDE DIAMETER OF PIPE PLUS 20 INCHES.
- PIPE BEDDING AND COVER MATERIAL SHALL BE IN ACCORDANCE WITH SECTION 8.4.3.0 OF SSSWCW. MINIMUM COVER OVER PIPE SHALL BE 12 INCHES.
- TRENCH BACKFILL MATERIAL SHALL BE MECHANICALLY COMPACTED GRANULAR BACKFILL IN ACCORDANCE WITH SECTION 8.43.4 OF SSSWCW BENEATH GREENSPACE AREAS, UNLESS ALTERNATIVE COMPACTION IS RECOMMENDED IN THE GEOTECHNICAL REPORT OR BY THE GEOTECHNICAL ENGINEER DURING CONSTRUCTION. IN WHICH CASE THE CONTRACTOR IS TO FOLLOW THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER.
- CAUTION MUST BE FOLLOWED REGARDING THE COMPACTION OF ALL UTILITY TRENCHES. FLOODING OF BACKFILL MATERIAL IS NOT ALLOWED.
- TRACER WIRE SHALL BE BLUE AND INSTALLED IN ACCORDANCE WITH SECTION 2.11.2 OF SSSWCW ON ALL BURIED NON-METALLIC PUBLIC WATER MAIN PIPE, PRIVATE WATER MAIN PIPE, AND BUILDING WATER SERVICE PIPE. TRACER WIRE SHALL BE INSULATED, SINGLE-CONDUCTOR, 12 GAUGE SOLID COPPER OR COPPER COATED STEEL WIRE, SECURED AT LEAST EVERY 10 FEET AND AT ALL BENDS, WITH ACCESS POINTS AT LEAST EVERY 300 FEET.
- PROPOSED WATER SERVICES SHOWN ON THIS PLAN SHALL TERMINATE AT A POINT FIVE (5) FEET FROM THE EXTERIOR BUILDING WALL.
- THE CONTRACTOR IS RESPONSIBLE FOR THE SIZE, TYPE AND NUMBER OF BENDS REQUIRED TO COMPLETE CONSTRUCTION, WHICH SHALL BE DETERMINED BY THE ENGINEER.
- THE CONTRACTOR SHALL ADJUST ALL VALVE BOXES TO FINISHED SURFACE UPON COMPLETION OF PAVING OPERATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR PRESSURE TESTING AND SAFE WATER SAMPLING. HYDROSTATIC TESTING SHALL BE IN ACCORDANCE WITH SECTION 4.15.0 OF SSSWCW. DISINFECTION SHALL BE IN ACCORDANCE WITH SECTION 4.16.0 OF SSSWCW AND CONFORM TO AWWA C651. WATER MAINS SHALL BE FLUSHED AND TESTED IN THE PRESENCE OF THE WATER UTILITY OPERATOR.

33 30 00 – SANITARY SEWERAGE

- WORK SHALL CONSIST OF INSTALLATION AND TESTING OF THE SANITARY SEWERAGE SYSTEM AND ALL APPURTENANCES.
- ALL ITEMS SHALL INCLUDE ALL NECESSARY MATERIALS AND LABOR TO COMPLETE THE ITEM IN PLACE.
- ALL PUBLIC SANITARY SEWERAGE WORK SHALL BE IN ACCORDANCE WITH SSSWCW AND MUNICIPALITY DEVELOPMENT STANDARDS.
- ALL PRIVATE SANITARY SEWERAGE WORK SHALL BE IN ACCORDANCE WITH WISCONSIN ADMINISTRATIVE CODE AND MUNICIPALITY DEVELOPMENT STANDARDS.
- POLYVINYL CHLORIDE (PVC) PIPE AND FITTINGS SHALL BE SDR 35 CONFORMING TO ASTM D3034 FOR DEPTHS LESS THAN 18 FEET, AND SHALL BE SDR 18 CONFORMING TO AWWA C900 FOR DEPTHS GREATER THAN 18 FEET, BOTH WITH PUSH-ON RUBBER GASKETED JOINTS IN ACCORDANCE WITH SECTION 8.2.0 OF SSSWCW.
- MANHOLES SHALL BE PRECAST REINFORCED CONCRETE IN ACCORDANCE WITH SECTION 8.39.0 OF SSSWCW AND CONFORM TO ASTM C478. SIZES SHALL BE AS INDICATED AND VERIFIED BY THE CONTRACTOR PRIOR TO ORDERING.
- TRENCH SECTION SHALL BE CLASS B IN ACCORDANCE WITH SECTION 3.2.6 OF SSSWCW. MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE OUTSIDE DIAMETER OF PIPE PLUS 20 INCHES.
- PIPE BEDDING AND COVER MATERIAL SHALL BE IN ACCORDANCE WITH SECTION 8.4.3.0 OF SSSWCW. MINIMUM COVER OVER PIPE SHALL BE 12 INCHES.
- TRENCH BACKFILL MATERIAL SHALL BE MECHANICALLY COMPACTED GRANULAR BACKFILL IN ACCORDANCE WITH SECTION 8.43.4 OF SSSWCW BENEATH GREENSPACE AREAS, UNLESS ALTERNATIVE COMPACTION IS RECOMMENDED IN THE GEOTECHNICAL REPORT OR BY THE GEOTECHNICAL ENGINEER DURING CONSTRUCTION. IN WHICH CASE THE CONTRACTOR IS TO FOLLOW THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER.
- CAUTION MUST BE FOLLOWED REGARDING THE COMPACTION OF ALL UTILITY TRENCHES. FLOODING OF BACKFILL MATERIAL IS NOT ALLOWED.
- ALL CONNECTIONS TO EXISTING SANITARY SEWER PIPES AND STRUCTURES SHALL BE CORED CONNECTIONS, UNLESS NOTED OTHERWISE. PREFABRICATED WYE CONNECTIONS ARE REQUIRED FOR ALL BUILDING SANITARY SEWER PIPES, UNLESS NOTED OTHERWISE.
- CLEANOUTS AND RISER EXTENSIONS SHALL BE INSTALLED IN ACCORDANCE WITH SPS 382.35 FROM SEWER PIPES TO GROUND SURFACE. LIGHT DUTY LOADING CLASSIFICATION SHALL BE USED IN UNPAVED AREAS. MEDIUM DUTY LOADING CLASSIFICATION SHALL BE USED IN PAVED FOOT TRAFFIC AREAS. HEAVY DUTY LOADING CLASSIFICATION SHALL BE USED IN PAVED VEHICULAR TRAFFIC AREAS. FRAMES AND COVERS SHALL BE SET FLUSH WITH SURFACE.
- TRACER WIRE SHALL BE GREEN AND INSTALLED IN ACCORDANCE WITH SECTION 2.11.2 OF SSSWCW ON ALL BURIED NON-METALLIC PUBLIC SANITARY SEWER PIPE, PRIVATE SANITARY INTERCEPTOR PIPE, AND BUILDING SANITARY SERVICE PIPE. TRACER WIRE SHALL BE INSULATED, SINGLE-CONDUCTOR, 12 GAUGE SOLID COPPER OR COPPER COATED STEEL WIRE, SECURED AT LEAST EVERY 10 FEET AND AT ALL BENDS, WITH ACCESS POINTS AT LEAST EVERY 300 FEET.
- PROPOSED WATER SERVICES SHOWN ON THIS PLAN SHALL TERMINATE AT A POINT FIVE (5) FEET FROM THE EXTERIOR BUILDING WALL.
- THE CONTRACTOR SHALL ADJUST ALL MANHOLE RIMS TO FINISHED SURFACE UPON COMPLETION OF PAVING OPERATIONS.
- AFTER INSTALLATION OF SANITARY SEWERAGE SYSTEM, CLEAN ALL DEBRIS FROM SYSTEM AND INSPECT FOR DAMAGE. CONDUCT TESTING OF INSTALLED PIPE IN ACCORDANCE WITH SSSWCW. REPAIR ANY DAMAGE AND REPLACE ANY PIPE NOT PASSING TESTING.

33 40 00 – STORMWATER DRAINAGE

- WORK SHALL CONSIST OF INSTALLATION AND TESTING OF THE STORMWATER DRAINAGE SYSTEM AND ALL APPURTENANCES.
- ALL ITEMS SHALL INCLUDE ALL NECESSARY MATERIALS AND LABOR TO COMPLETE THE ITEM IN PLACE.
- ALL PUBLIC STORMWATER DRAINAGE WORK SHALL BE IN ACCORDANCE WITH SSSWCW AND MUNICIPALITY DEVELOPMENT STANDARDS.
- ALL PRIVATE STORMWATER DRAINAGE WORK SHALL BE IN ACCORDANCE WITH WISCONSIN ADMINISTRATIVE CODE AND MUNICIPALITY DEVELOPMENT STANDARDS.
- REINFORCED CONCRETE PIPE (RCP) AND END SECTIONS SHALL BE IN ACCORDANCE WITH SECTION 8.6.0 OF SSSWCW AND CONFORM TO ASTM C76 WITH RUBBER GASKETED JOINTS CONFORMING TO ASTM C443, UNLESS NOTED OTHERWISE. 12-INCH DIAMETER PIPE SHALL BE CLASS V, 15-INCH DIAMETER PIPE SHALL BE CLASS IV, AND 18-INCH DIAMETER PIPE AND LARGER SHALL BE CLASS III.
- CORRUGATED METAL PIPE (CMP) AND END SECTIONS SHALL BE 16 GAUGE CONFORMING TO ASTM A760.
- HIGH-DENSITY POLYETHYLENE (HDPE) PIPE AND FITTINGS SHALL BE ADS N12 AS APPROVED BY THE WISCONSIN DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES PLUMBING PRODUCTS REGISTER.
- POLYVINYL CHLORIDE (PVC) PIPE AND FITTINGS SHALL BE SDR 35 CONFORMING TO ASTM D3034 WITH PUSH-ON RUBBER GASKETED JOINTS CONFORMING TO ASTM D3219.
- MANHOLES SHALL BE PRECAST REINFORCED CONCRETE IN ACCORDANCE WITH SECTION 8.39.0 OF SSSWCW AND CONFORM TO ASTM C478. SIZES SHALL BE AS INDICATED AND VERIFIED BY THE CONTRACTOR PRIOR TO ORDERING.
- CATCH BASINS SHALL BE PRECAST REINFORCED CONCRETE IN ACCORDANCE WITH SECTION 3.6.0 OF SSSWCW AND CONFORM TO ASTM C478. SIZES SHALL BE AS INDICATED AND VERIFIED BY THE CONTRACTOR PRIOR TO ORDERING.
- INLETS SHALL BE PRECAST REINFORCED CONCRETE IN ACCORDANCE WITH SECTION 3.6.0 OF SSSWCW AND CONFORM TO ASTM C913. SIZES SHALL BE AS INDICATED AND VERIFIED BY THE CONTRACTOR PRIOR TO ORDERING.
- AREA DRAINS SHALL BE ADS NYLOPLAST AS APPROVED BY THE WISCONSIN DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES PLUMBING PRODUCTS REGISTER.
- FRAMES AND GRATES SHALL BE AS INDICATED. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING FRAMES AND GRATES ARE COMPATIBLE WITH PRECAST STRUCTURES PRIOR TO ORDERING.
- TRENCH SECTION SHALL BE CLASS B IN ACCORDANCE WITH SECTION 3.2.6 OF SSSWCW. MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE OUTSIDE DIAMETER OF PIPE PLUS 20 INCHES.
- PIPE BEDDING AND COVER MATERIAL SHALL BE IN ACCORDANCE WITH SECTION 8.4.3.0 OF SSSWCW. MINIMUM COVER OVER PIPE SHALL BE 12 INCHES.
- TRENCH BACKFILL MATERIAL SHALL BE MECHANICALLY COMPACTED GRANULAR BACKFILL IN ACCORDANCE WITH SECTION 8.43.5 OF SSSWCW BENEATH GREENSPACE AREAS, UNLESS ALTERNATIVE COMPACTION IS RECOMMENDED IN THE GEOTECHNICAL REPORT OR BY THE GEOTECHNICAL ENGINEER DURING CONSTRUCTION. IN WHICH CASE THE CONTRACTOR IS TO FOLLOW THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER.
- CAUTION MUST BE FOLLOWED REGARDING THE COMPACTION OF ALL UTILITY TRENCHES. FLOODING OF BACKFILL MATERIAL IS NOT ALLOWED.
- ALL CONNECTIONS TO EXISTING STORM SEWER PIPES AND STRUCTURES SHALL BE CORED CONNECTIONS, UNLESS NOTED OTHERWISE.
- FLEXIBLE COMPRESSION COUPLINGS SHALL BE USED IN THE CONNECTION OF DISSIMILAR PIPE MATERIALS.
- CLEANOUTS AND RISER EXTENSIONS SHALL BE INSTALLED IN ACCORDANCE WITH SPS 382.35 FROM SEWER PIPES TO GROUND SURFACE. LIGHT DUTY LOADING CLASSIFICATION SHALL BE USED IN UNPAVED AREAS. MEDIUM DUTY LOADING CLASSIFICATION SHALL BE USED IN PAVED FOOT TRAFFIC AREAS. HEAVY DUTY LOADING CLASSIFICATION SHALL BE USED IN PAVED VEHICULAR TRAFFIC AREAS. FRAMES AND COVERS SHALL BE SET FLUSH WITH SURFACE.
- TRACER WIRE SHALL BE BROWN AND INSTALLED IN ACCORDANCE WITH SECTION 2.11.1 OF SSSWCW ON ALL BURIED NON-METALLIC PUBLIC STORM SEWER PIPE, PRIVATE STORM INTERCEPTOR PIPE, AND BUILDING STORM SERVICE PIPE. TRACER WIRE SHALL BE INSULATED, SINGLE-CONDUCTOR, 12 GAUGE SOLID COPPER OR COPPER COATED STEEL WIRE, SECURED AT LEAST EVERY 10 FEET AND AT ALL BENDS, WITH ACCESS POINTS AT LEAST EVERY 300 FEET.
- FIELD TILE ENCOUNTERED DURING CONSTRUCTION SHALL BE CONNECTED TO THE STORMWATER DRAINAGE SYSTEM. IF THIS CANNOT BE ACCOMPLISHED, THEN IT SHALL BE REPAIRED WITH NEW PIPE OF SIMILAR SIZE AND MATERIAL. DOCUMENTATION OF SUCH FIELD TILE SHALL BE PROVIDED TO THE OWNER.
- PROPOSED STORM SERVICES SHOWN ON THIS PLAN SHALL TERMINATE AT A POINT FIVE (5) FEET FROM THE EXTERIOR BUILDING WALL. CONNECTIONS TO DOWNSPOUTS SHALL BE PER DETAILS ON THE BUILDING PLUMBING PLANS. THE EXACT LOCATION OF DOWNSPOUT