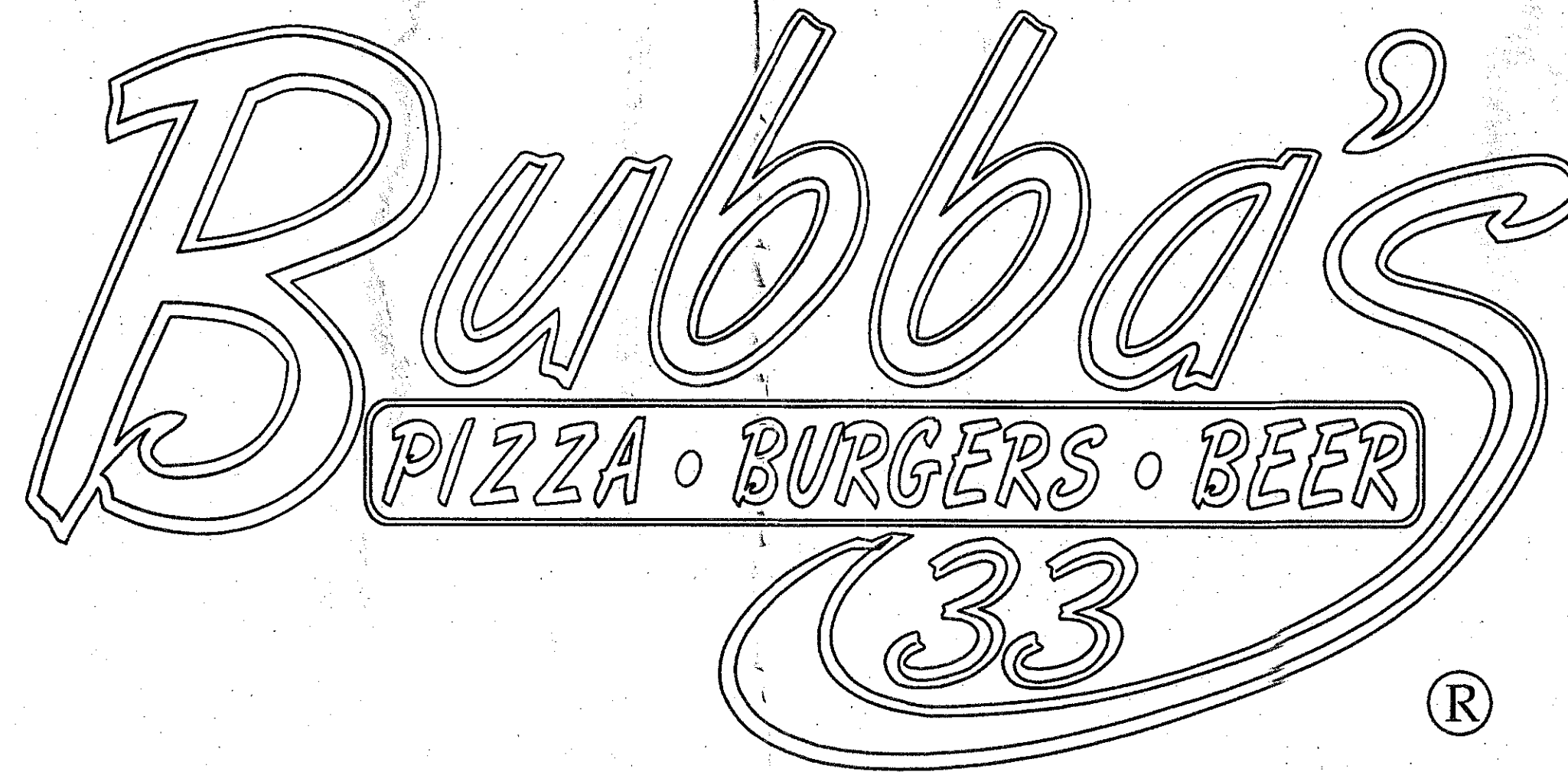


STORM SEWER IMPROVEMENTS
TO SERVE

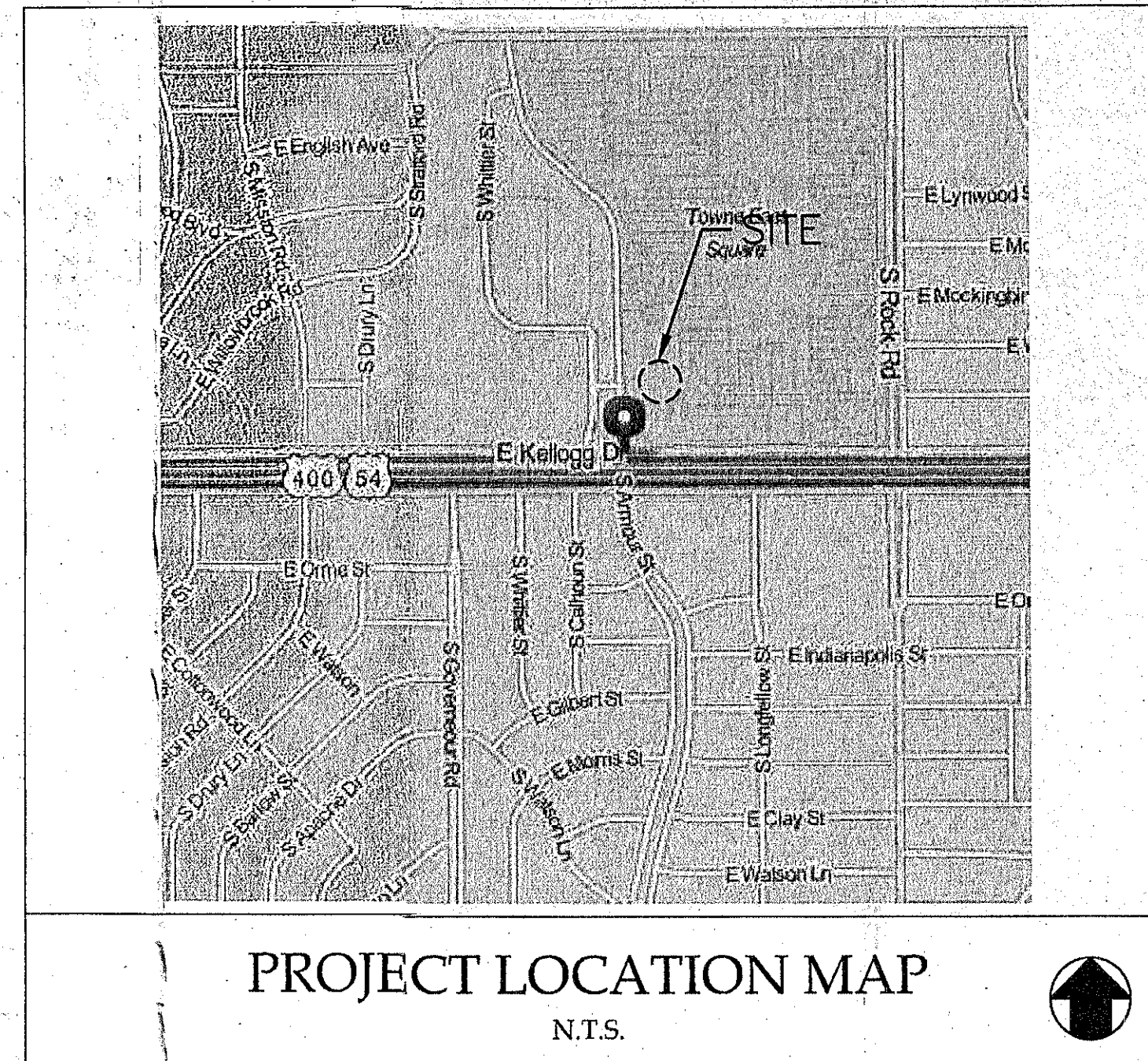
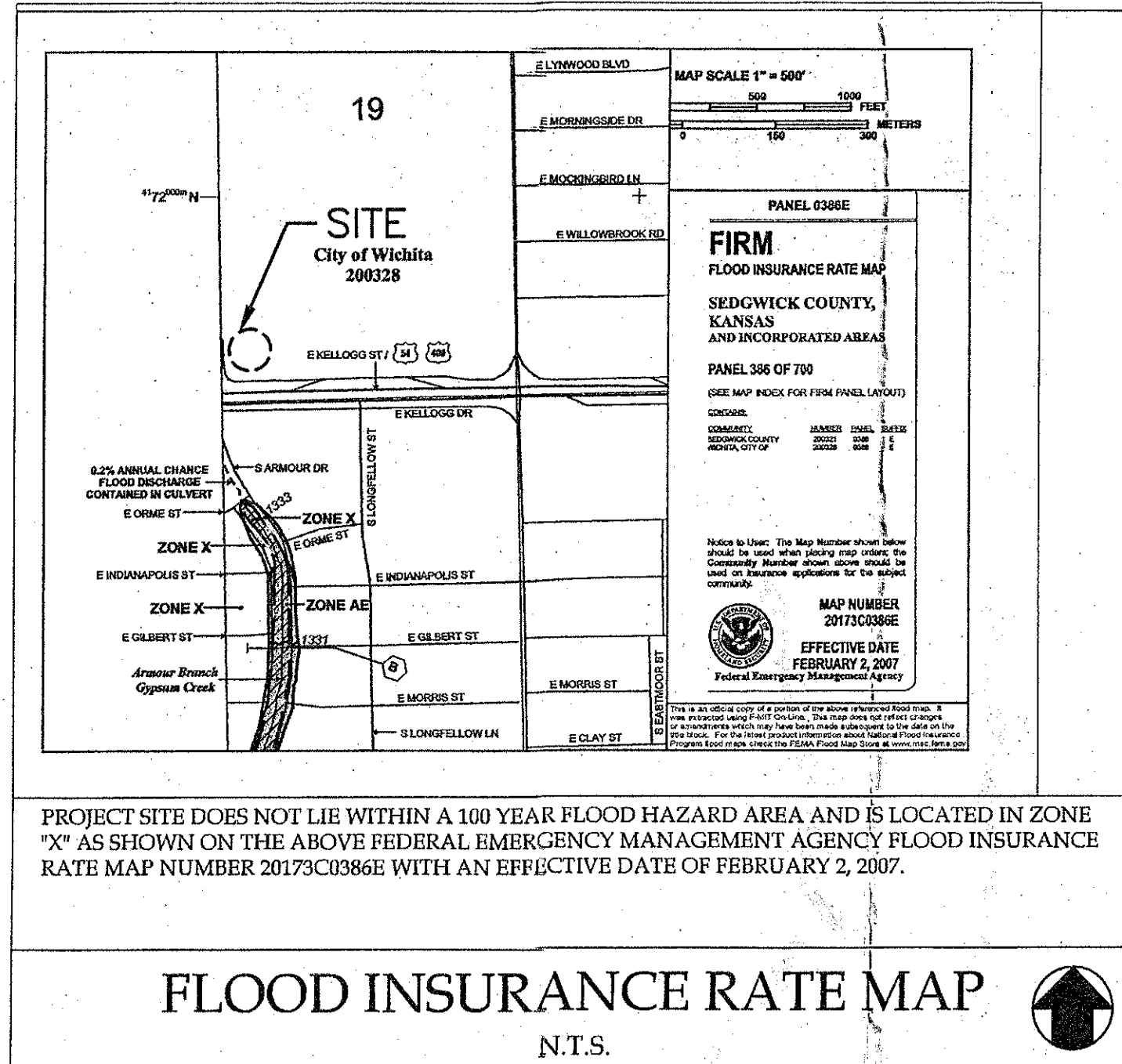


412 S. TOWNE EAST DRIVE
SEDGWICK COUNTY

WICHITA, KS ZONING: LIMITED COMMERCIAL AND
COMMUNITY UNIT PLAN

GARY L. JANZEN, P.E. CITY ENGINEER

PROJECT NUMBER
0330 PPD (607861)



Stormwater Certification:
Redevelopment

These construction plans were prepared in accordance with the current Stormwater Management Regulations as set forth in the City of Wichita's Stormwater Management Ordinance 16.32 and the policies/guidelines presented in the Wichita/Sedgwick County Stormwater Manual.

Disturbed Area = 2.25 ACRES
Water Quality Treatment: YES
Downstream Channel Protection: NO
Detention: NO
The BMP used for this development is SNOUT
Detention provided by ponds of the shopping center development.

PPD NOTES:

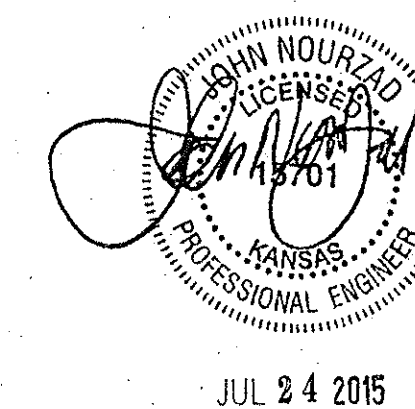
- THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE SAFETY REGULATIONS. ALL CONSTRUCTION SHALL BE COMPLETED FOLLOWING CURRENT CITY STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
- CONTRACTOR WILL BE REQUIRED TO PROVIDE NOTICE TO UTILITY COMPANIES A MINIMUM OF SEVENTY-TWO (72) HOURS PRIOR TO ANY EXCAVATION, AS FOLLOWS: KANSAS ONE-CALL 887-2470. THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF AN EMERGENCY:
 - AT&T 1-800-246-8464
 - BLACK HILLS ENERGY 1-800-694-8989
 - CITY OF WICHITA WATER 1-316-268-4555
 - CITY OF WICHITA SEWER 1-316-268-4073
 - CITY OF WICHITA STORMWATER 1-316-268-4090
 - CITY OF WICHITA TRAFFIC 1-316-268-4034
 - COX COMMUNICATIONS 1-888-249-3530
 - KANSAS GAS SERVICE 1-888-482-4950
 - WESTAR ENERGY 1-800-544-4657
- UTILITY SERVICE LINES, POLES, ETC. ARE TO BE ADJUSTED AS NECESSARY BY OTHERS PRIOR TO CONSTRUCTION UNLESS THE PLANS SPECIFICALLY CALL FOR THEIR ADJUSTMENT BY THE CONTRACTOR OR UNLESS THE PLANS SPECIFICALLY IDENTIFY A UTILITY TO BE ADJUSTED BY ITS OWNER DURING CONSTRUCTION. EXISTING UTILITIES AND THEIR LOCATION AS SHOWN ON THE PLANS REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.
- RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES AND EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE DISPOSED OF ON SITES TO BE PROVIDED BY THE CONTRACTOR. THESE SITES SHALL BE APPROVED BY THE ENGINEER AS TO SUITABILITY, APPEARANCE AND SITE LOCATION. LOCATIONS, IN THE OPINION OF THE ENGINEER, THAT WILL LEAVE AN UNSIGHTLY APPEARANCE WILL NOT BE APPROVED. ALL DISPOSAL SITES MUST BE APPROVED BY THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT. MATERIAL EITHER STOCKPILED OR DISPOSED OF IN A FLOOD PLAIN WILL REQUIRE A KANSAS STATE BOARD OF AGRICULTURE PERMIT. ANY MATERIAL DUMPED IN WATERS OF THE UNITED STATES OR WETLANDS IS SUBJECT TO U.S. CORPS OF ENGINEERS PERMITTING REGULATIONS. ANY MATERIAL BURIED OR STOCKPILED BEYOND APPROVED CONSTRUCTION LIMITS WILL REQUIRE ADDITIONAL ARCHAEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED BORROW LOCATION.
- TREES AND SHRUBS IN PUBLIC RIGHT-OF-WAY WHICH ARE IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE REMOVED BY THE CONTRACTOR WITH THE ENGINEER'S APPROVAL. TREES AND SHRUBS WHICH ARE NOT IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE SAVED AND PROTECTED FROM DAMAGE.
- THE CONTRACTOR SHALL GIVE ALL PROPERTY OWNERS AND/OR TENANTS OF DEVELOPED PROPERTY ADJACENT TO THE CONSTRUCTION OF THIS PROJECT A MINIMUM OF TEN (10) DAYS NOTICE PRIOR TO START OF CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR WILL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH IRONS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS.
- THE WATER DISTRIBUTION DIVISION SHALL FIELD LOCATE WATER VALVES ONE TIME DURING CONSTRUCTION WHEN REQUESTED BY THE CONTRACTOR. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PRESERVE SUCH FIELD LOCATIONS DURING THE CONSTRUCTION PROCESS. WATER VALVES, VALVE BOXES OR FIRE HYDRANTS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY CONTRACTOR AT HIS OWN EXPENSE. VALVE BOXES AND WATER METERS WITHIN THE PROJECT LIMITS SHALL BE ADJUSTED TO MATCH FIELD GRADES.
- THE CONTRACTOR SHALL NOTIFY THE CONSULTANT ENGINEER AND TOM MASON WITH THE CITY AT 316-268-4574 WITH THE ANTICIPATED CONSTRUCTION START DATE AND NOTIFY THEM OF PROJECT COMPLETION. STAKING AND INSPECTION FOR THIS PROJECT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- IF TRAFFIC IS IMPACTED BY CONSTRUCTION, A TRAFFIC CONTROL PLAN MUST BE SUBMITTED AND APPROVED BY THE CITY TRAFFIC ENGINEER, BRIAN COON AT TRAFFIC@WICHITA.GOV. BEFORE CONSTRUCTION CAN BEGIN, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL MEASURES TO FACILITATE CONSTRUCTION. ALL CONSTRUCTION ZONE MARKINGS AND SIGNAGE SHALL CONFORM TO THE LATEST VERSION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AS PUBLISHED BY THE US DEPT. OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION. ALL COSTS ASSOCIATED WITH CONSTRUCTION MARKINGS AND SIGNAGE SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
- ALL ELEVATIONS SHOWN ARE NAVD 88.
- ALL AREAS DISTURBED DURING CONSTRUCTION THAT WILL NOT BE UNDER PROPOSED PAVEMENT SHALL BE RESTORED TO MATCH EXISTING CONDITIONS.
- A PORTION OF EXCESS EXCAVATED MATERIAL SHALL BE MOUNDING AROUND MANHOLES WHICH EXTEND MORE THAN ONE (1) FOOT ABOVE THE EXISTING GROUND. SUCH MOUND SHALL BE CONSTRUCTED WITH NEW DEVELOPMENT A SIX (6) FOOT DIAMETER FLAT TOP WITH 4 TO 1 SIDE SLOPES DOWN TO THE ORIGINAL GROUND. THE ELEVATION OF THE FLAT TOP OF THE MOUND SHALL BE 0.4 FOOT BELOW THE TOP TO THE MANHOLE.
- GEOTECHNICAL REPORT AVAILABLE UPON REQUEST.
- CONTRACTOR SHALL LIMIT THE EXTENT OF TRENCH OPENINGS OVERNIGHT AND WEEKENDS TO LESS THAN 50 FEET.
- CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM ALL MANHOLE COVERS.
- CITY MAINTENANCE OF STORM SEWER ENDS AT RIGHT-OF-WAY OR EASEMENT LINE. ALL LINES ARE PRIVATELY OWNED AND MAINTAINED.
- ANY SIDEWALK, DRIVE APPROACH, OR STREET PAVEMENT REMOVED TO CONSTRUCT PROJECT MUST HAVE A PAVEMENT CUT PERMIT AND BE REPLACED BY THE CITY CONTRACTOR. PERMITS CAN BE OBTAINED BY CALLING 316-268-4501 OR 316-268-4480.
- THE INSPECTING FIRM SHALL SUBMIT TO THE CITY STORMWATER MAINTENANCE DIVISION A DIGITAL COPY OF THE CCTV INSPECTION OF THE CONDUITS AND STRUCTURES FOLLOWING CONSTRUCTION. THE DIGITAL FILE FORMATION SHALL BE COMPATIBLE WITH THE CITY INPUT TEMPLATE. A COPY OF THE TEMPLATE IS AVAILABLE UPON REQUEST AT 316-268-4090.

SHEET INDEX:

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| C2.0 | DEMOLITION PLAN |
| C3.0 | SITE PLAN |
| C4.0 | GRADING AND DRAINAGE PLAN |
| C4.1 | EQUIVALENT RESIDENTIAL UNIT |
| C5.0 | OVERALL UTILITY PLAN |
| C5.1 | STORM SEWER PLAN |
| C5.3 | STORM SEWER PROFILES |
| C5.4 | STORM SEWER PROFILES |
| C6.0 | STORMWATER POLLUTION PREVENTION PLAN |
| C7.2-C7.6 | EROSION DETAILS |
| C7.7-C7.9 | STORMWATER DETAILS |

AS BUILTS

Contractor: Alan's Excavation W.B. Carter	Project Inspector: Larry Gann
Date: 11/18/2015	KEMILLER ENGINEERING PA 117 E. Lewis, Wichita, KS 67202 (316)264-0242



JUL 24 2015

APPROVED AS NOTED
BY WICHITA PUBLIC WORKS ENGINEERING
AND STORMWATER DIVISION

Engineering: *Rebecca Smith* 9/1/2015
Stormwater: *[Signature]* 09/01/15

NOTE TO CONTRACTORS

Inspection and testing for this project is to be provided by a Licensed Consulting Engineering Firm under contract with the Owner/Developer. Said inspection to be in accordance with the City of Wichita standard construction engineering practices and certified by a Licensed Professional Engineer in the state of Kansas. No work shall be performed the Contractor without such inspection nor shall any work be commenced without written authorization by City Engineering. All Construction and Materials shall comply with the current City of Wichita Specifications and Standards and Special Provisions. (on file and available at Wichita.gov).

An approved copy of these plans signed by City staff are required on-site.

ENGINEER:
GreenbergFarrow

CONTACT: BRIAN OLESEN, P.E.
21 S. EVERGREEN AVENUE, SUITE 200
ARLINGTON HEIGHTS, ILLINOIS 60005
TEL: (920) 364-0610
EMAIL: BOLESEN@GREENBERGFARROW.COM

GENERAL NOTES:

- CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY AND ALL WAYS, MEANS AND METHODS OF CONSTRUCTION.
- CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL AGENCY CODES, STANDARDS AND SPECIFICATIONS.
- CONTRACTOR SHALL OBTAIN ALL NECESSARY SITE PERMITS AND LICENSES FROM THE APPLICABLE GOVERNING AUTHORITIES.
- ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE LATEST STATE AND LOCAL GOVERNMENT CONSTRUCTION STANDARDS AND SPECIFICATIONS.
- UNLESS OTHERWISE NOTED ON THE PLANS, CONTRACTOR SHALL NOTIFY THE LOCAL ENGINEERING OR PUBLIC WORKS DEPARTMENT AND/OR OTHER PROJECT GOVERNING AUTHORITY(S) A MINIMUM OF FORTY-EIGHT (48) HOURS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS AND TO SCHEDULE ANY REQUIRED SITE INSPECTIONS.
- CONTRACTOR SHALL SCHEDULE A UTILITY LOCATING SERVICE AND/OR NOTIFY ALL UTILITY COMPANIES (GAS, ELECTRIC, TELEPHONE, CABLE, ETC.) AND THE LOCAL MUNICIPALITY TO DETERMINE THE LOCATION OF UNDERGROUND UTILITIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION IN ORDER TO AVOID POTENTIAL CONFLICTS. IT IS ULTIMATELY THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WHETHER INDICATED ON THE PLANS OR NOT AND TO HAVE THESE UTILITIES STAKED PRIOR TO CONSTRUCTION. ANY NECESSARY RELOCATIONS OR REMOVALS OF EXISTING UTILITY LINES SHALL BE PERFORMED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL PRIVATE AND PUBLIC UTILITIES EVEN THOUGH THEY MAY NOT BE SHOWN ON THE PLANS. ANY UTILITY THAT IS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS EXPENSE AND TO THE SATISFACTION OF THE UTILITY OWNER.
- ALL EASEMENTS FOR EXISTING UTILITIES, BOTH PUBLIC AND PRIVATE, AND UTILITIES WITHIN PUBLIC RIGHTS-OF-WAY ARE SHOWN ON THE PLANS PREPARED BY THE SURVEYOR ACCORDING TO INFORMATION AVAILABLE FROM PUBLIC RECORDS OR VISIBLE FIELD MARKINGS. THE CONTRACTOR SHALL BE ULTIMATELY RESPONSIBLE FOR DETERMINING THE EXACT LOCATION IN THE FIELD OF THESE UTILITY LINES AND FOR THEIR PROTECTION FROM DAMAGE DUE TO CONSTRUCTION OPERATIONS. IF EXISTING UTILITY LINES OF ANY NATURE ARE ENCOUNTERED WHICH CONFLICT IN LOCATION WITH THE PROPOSED CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER SO THE CONFLICT MAY BE RESOLVED.
- ALL UTILITY CONNECTIONS TO EXISTING LINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE RULES AND REGULATIONS AND TO THE SATISFACTION OF THE APPLICABLE UTILITY OWNER(S).
- CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, COORDINATES AND ELEVATIONS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES SO THE CONFLICT MAY BE RESOLVED.
- ALL PROPERTY MARKERS AND SURVEY REFERENCE MARKERS SHALL BE CAREFULLY PRESERVED DURING CONSTRUCTION UNTIL THEIR LOCATION HAS BEEN WITNESSED OR OTHERWISE TIED IN BY AN AUTHORIZED AGENT OR PROFESSIONALLY LICENSED SURVEYOR.
- THE SAFE AND ORDERLY PASSAGE OF TRAFFIC AND PEDESTRIANS SHALL BE PROVIDED WHERE CONSTRUCTION OPERATIONS ABOUT PUBLIC THROUGH-FARES AND ADJACENT PROPERTY.
- ALL AREAS DISTURBED BY THE GENERAL CONTRACTOR OR SUB-CONTRACTORS SHALL BE RETURNED TO THE ORIGINAL CONDITION OR BETTER, EXCEPT WHERE PROPOSED CONSTRUCTION IS INDICATED ON THE PLANS.
- PRIOR TO INITIAL ACCEPTANCE BY THE OWNER(S) AND/OR GOVERNING AUTHORITY, ALL WORK SHALL BE INSPECTED AND APPROVED BY THE OWNER AND MUNICIPALITY ENGINEER OR HIS REPRESENTATIVE(S). THE CONTRACTOR SHALL GUARANTEE HIS PRIVATE WORK FOR A PERIOD OF 12 (TWELVE) MONTHS FROM THE DATE OF SUBSTANTIAL COMPLETION AND SHALL BE HELD RESPONSIBLE FOR ANY DEFECTS IN MATERIAL OR WORKMANSHIP OF THIS WORK DURING THAT PERIOD AND UNTIL FINAL ACCEPTANCE IS MADE. ALL PUBLIC WORK REQUIRES A 24 (TWENTY FOUR) MONTH BOND PER CITY OF WICHITA REQUIREMENTS AS OUTLINED ON THE WEBSITE AND SUBMIT REQUIRED BOND FORMS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SAFE AND ADEQUATE WORKING CONDITIONS THROUGHOUT THE DURATION OF CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.
- CONTRACTOR SHALL KEEP THE PUBLIC STREET PAVEMENTS CLEAN OF DIRT AND DEBRIS AND, WHEN NECESSARY, CLEAN PAVEMENTS AT THE END OF EACH WORKING DAY.
- ALL CONSTRUCTION STAKING, SCHEDULING AND PAYMENT IS THE RESPONSIBILITY OF THE CONTRACTOR.
- AFTER COMPLETION OF THE PROPOSED IMPROVEMENTS AND WHEN REQUIRED BY THE GOVERNING AUTHORITY(S), CONTRACTOR SHALL PROVIDE THE OWNER AND ENGINEER WITH AS-BUILT AND/OR RECORD DRAWINGS, SIGNED AND SEALED BY A PROFESSIONALLY LICENSED ENGINEER OR SURVEYOR AND SHALL INCLUDE AT A MINIMUM (WHERE APPLICABLE TO THE SCOPE OF WORK) THE FOLLOWING ITEMS:
 - TOPOGRAPHY AND SPOT GRADE ELEVATIONS OF ALL PROPOSED PERMANENT SITE FEATURES INCLUDING ANY STORM WATER FACILITIES OR MODIFICATIONS TO EXISTING STORM WATER FACILITIES.
 - HORIZONTAL AND VERTICAL LOCATION AND ALIGNMENT OF ALL PROPOSED ROADWAYS, PARKING LOTS, UTILITIES, BUILDINGS OR OTHER PERMANENT SITE FEATURES.
 - RIM AND INVERT AND/OR TOP OF PIPE ELEVATIONS FOR ALL PROPOSED UTILITIES.
 - AS-BUILT AND/OR RECORD DRAWING INFORMATION SHALL BE SHOWN ON THE APPROVED ENGINEERING PLANS ISSUED FOR CONSTRUCTION. ANY AND ALL DEVIATIONS FROM THESE APPROVED PLANS SHALL BE SHOWN BY MEANS OF STRIKING THROUGH THE PROPOSED INFORMATION AND CLEARLY INDICATING THE AS-BUILT LOCATIONS AND ELEVATIONS ON THE APPLICABLE PLAN SHEET.

SITE GRADING AND PAVING NOTES:

- ALL SITE WORK, GRADING, AND PAVING OPERATIONS WITHIN THE LIMITS OF THE PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH THE NOTES IN THE PLANS AND THE STANDARDS, SPECIFICATIONS, CODES AND ORDINANCES OF THE LOCAL GOVERNING AUTHORITIES. IN CASE OF CONFLICT, THE MORE STRINGENT CODE SHALL TAKE PRECEDENCE.
- EARTH EXCAVATION SHALL INCLUDE CLEARING, STRIPPING AND STOCKPILING TOPSOIL, REMOVING UNSUITABLE MATERIALS, CONSTRUCTION OF EMBANKMENTS, NON-STRUCTURAL FILLS, FINAL SHAPING AND TRIMMING TO THE LINES, GRADES AND CROSS SECTIONS SHOWN ON THE PLANS. ALL UNSUITABLE OR EXCESS MATERIAL SHALL BE DISPOSED OF LEGALLY OFFSITE OR AS DIRECTED BY THE PROJECT REPRESENTATIVE IN THE FIELD.
- EXCAVATED TOPSOIL SHALL BE STOCKPILED ON THE SITE IN AREAS DESIGNATED BY THE PROJECT ENGINEER UNTIL SUCH TIME THAT THIS TOPSOIL CAN BE USED FOR FINAL GRADING. UNLESS OTHERWISE NOTED ON THE PLANS, A MINIMUM OF 6" TOPSOIL RE-SPREAD AND SEEDING FOR ALL DISTURBED AREAS IS REQUIRED.
- THE GEOTECHNICAL INVESTIGATION REPORT FOR THE SITE AND ALL ADDENDA THERETO ARE SUPPORTING DOCUMENTS FOR THIS PROJECT. THE RECOMMENDATIONS AS STATED IN SAID REPORT ARE HEREBY INCORPORATED INTO THESE CONSTRUCTION NOTES BY REFERENCE AND SHALL BE FOLLOWED BY ALL CONTRACTORS. THE GRADING OPERATIONS ARE TO BE CLOSELY SUPERVISED AND INSPECTED, PARTICULARLY DURING THE REMOVAL OF UNSUITABLE MATERIAL AND THE CONSTRUCTION OF EMBANKMENTS OR BUILDING PADS, BY A SOILS ENGINEER OR HIS REPRESENTATIVE. FURTHER CONSTRUCTION OPERATIONS WILL NOT BE PERMITTED UNTIL THE SOILS ENGINEER ISSUES A WRITTEN STATEMENT THAT THE AREA IN QUESTION HAS BEEN SATISFACTORILY PREPARED AND IS READY FOR CONSTRUCTION.
- ALL TESTING, INSPECTION AND SUPERVISION OF SOIL QUALITY, UNSUITABLE SOIL REMOVAL AND ITS REPLACEMENT AND OTHER SOILS RELATED OPERATIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE COORDINATED WITH AND PERFORMED AT THE DIRECTION OF THE OWNER'S GEOTECHNICAL ENGINEER.
- THE CONTRACTOR SHALL USE CARE IN GRADING NEAR TREES, SHRUBS, AND BUSHES WHICH ARE NOT NOTED TO BE REMOVED SO AS NOT TO CAUSE INJURY TO ROOTS OR TRUNKS.
- THE CONTRACTOR SHALL USE CARE IN GRADING OR EXCAVATING NEAR ANY AND ALL EXISTING ITEMS WHICH ARE NOT INDICATED TO BE REMOVED. ANY DAMAGE DONE TO THESE EXISTING ITEMS BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT HIS OWN EXPENSE.
- REMOVED PAVEMENTS, SIDEWALKS, CURBS, TREES AND STUMPS SHALL BE DISPOSED OF LEGALLY OFFSITE AT LOCATIONS DETERMINED BY THE CONTRACTOR.
- ON AND OFFSITE PAVING AND CURBS TO REMAIN SHALL BE PROTECTED FROM DAMAGE, AND, IF DAMAGED, SHALL BE REPLACED PROMPTLY TO MEET STATE AND LOCAL STANDARD SPECIFICATIONS IN MATERIALS AND WORKMANSHIP.
- PROPOSED ELEVATIONS INDICATE FINISHED GRADE CONDITIONS. FOR ROUGH GRADING ELEVATIONS ALLOW FOR THE THICKNESS OF THE PROPOSED PAVEMENT SECTION (ROADS, WALKS, DRIVE, ETC.) OR TOPSOIL AS INDICATED ON THE PLANS.
- CONTRACTOR SHALL PROVIDE SMOOTH VERTICAL CURVES THROUGH THE HIGH AND LOW POINTS INDICATED BY SPOT ELEVATIONS ON THE PLANS. CONTRACTOR SHALL PROVIDE UNIFORM SLOPES BETWEEN NEW AND EXISTING GRADES AND AVOID ANY RIDGES AND/OR DEPRESSIONS.
- ALL PROPOSED GRADING, PAVEMENT, APRONS, CURBS, WALKS, ETC. SHALL MATCH EXISTING GRADES FLUSH.
- ALL EXISTING AND PROPOSED TOP OF FRAME ELEVATIONS FOR STORM, SANITARY, WATER AND OTHER UTILITY STRUCTURES SHALL BE ADJUSTED TO MEET FINISHED GRADE WITHIN THE PROJECT LIMITS.
- SITE GRADING AND CONSTRUCTION OF THE PROPOSED SITE IMPROVEMENTS SHALL NOT CAUSE PONDING OF STORM WATER. ALL AREAS ADJACENT TO THESE IMPROVEMENTS SHALL BE GRADED TO ALLOW POSITIVE DRAINAGE AND MATCH EXISTING GRADES FLUSH.
- CONTRACTOR SHALL ENSURE POSITIVE SITE DRAINAGE AT THE END OF EACH WORKING DAY DURING CONSTRUCTION OPERATIONS. FAILURE TO PROVIDE ADEQUATE DRAINAGE WILL PRECLUDE THE CONTRACTOR FROM ANY POSSIBLE COMPENSATION REQUESTED DUE TO DELAYS OR UNSUITABLE MATERIALS CREATED AS A RESULT.
- DRIVEWAYS SHALL BE CONSTRUCTED SO AS NOT TO IMPEDE THE SURFACE DRAINAGE SYSTEM.
- TRAFFIC CONTROL DEVICES SHALL BE IN CONFORMANCE WITH THE APPLICABLE STATE DEPARTMENT OF TRANSPORTATION STANDARDS AND SHALL BE INSTALLED AND MAINTAINED WHENEVER CONSTRUCTION FOR UTILITIES ARE WITHIN STREET AREAS. APPLICABLE ORDINANCES OF THE MUNICIPALITY, COUNTY OR STATE SHALL ALSO GOVERN THE TRAFFIC CONTROL REQUIREMENTS.

STORM SEWER NOTES:

- ALL STORM SEWER CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE NOTES IN THE PLANS AND THE STANDARDS, SPECIFICATIONS, CODES AND ORDINANCES OF THE LOCAL GOVERNING AUTHORITIES. IN CASE OF CONFLICT, THE MORE STRINGENT CODE SHALL TAKE PRECEDENCE.
- STORM SEWER PIPE AND STRUCTURES SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH LOCAL REQUIREMENTS AND SPECIFICATIONS.
- RCP STORM SEWER PIPE 12" IN DIAMETER AND LARGER SHALL BE REINFORCED CONCRETE PIPE, CLASS IV, PER ASTM C76 WITH FLEXIBLE (O-RING) GASKET JOINTS IN CONFORMANCE WITH ASTM C443.
- HDPE STORM SEWER PIPE SHALL BE HIGH DENSITY POLYETHYLENE PIPE PER ASTM F2306 WITH WATERTIGHT JOINTS CONFORMING TO ASTM D3212.
- PVC STORM SEWER PIPE SHALL BE POLYVINYL CHLORIDE SDR 35 PIPE PER ASTM D3034 WITH WATERTIGHT JOINTS CONFORMING TO ASTM D3212, UNLESS OTHERWISE NOTED.
- STORM SEWER TRENCH EXCAVATIONS AND PIPE FOUNDATION, BEDDING AND HAUNCHING SHALL BE CONSTRUCTED IN ACCORDANCE WITH LOCAL REQUIREMENTS AND SPECIFICATIONS.
 - STORM SEWERS MUST BE PLACED ON PROPERLY COMPACTED STONE BEDDING. PIPE BEDDING MATERIAL SHALL BE A MINIMUM OF FOUR (4) INCHES THICK UNDER THE BARREL OF THE PIPE AND FOR PVC PIPE, MATERIAL SHALL BE EXTENDED A MINIMUM OF 12" OVER THE TOP OF THE PIPE PER ASTM D2321. PIPE BEDDING MATERIAL SHALL BE CRUSHED GRAVEL OR STONE MEETING LOCAL STANDARD GRADATIONS.
 - TRENCH BACKFILL MATERIAL SHALL BE PLACED AND COMPACTED TO A MINIMUM OF 98% STANDARD PROCTOR MAXIMUM DRY DENSITY, PER ASTM D698, OVER ALL STORM SEWERS WHICH ARE CONSTRUCTED UNDER, OR WITHIN TWO (2) FEET OF, ANY PROPOSED OR EXISTING PAVEMENT, PARKING LOTS OR SIDEWALKS.
- REQUIRED STORM STRUCTURE RIM ADJUSTMENTS SHALL BE MADE WITH PRECAST CONCRETE ADJUSTING RINGS NOT TO EXCEED A MAXIMUM OF EIGHT (8) INCHES IN OVERALL HEIGHT. A MAXIMUM OF TWO (2) ADJUSTING RINGS ARE ALLOWED. BUTYROPE JOINT SEALANT SHALL BE USED ON ALL JOINTS BETWEEN THE PRECAST ELEMENTS.
- FIELD TILE ENCOUNTERED DURING CONSTRUCTION OPERATIONS SHALL BE CONNECTED TO THE PROPOSED STORM SEWER SYSTEM OR EXTENDED TO OUTLET INTO A PROPOSED DRAINAGE WAY. IF THIS CANNOT BE ACCOMPLISHED, THEN IT SHALL BE REPAIRED WITH NEW PIPE OF SIMILAR SIZE AND MATERIAL TO THE ORIGINAL LINE AND PUT IN ACCEPTABLE OPERATING CONDITION. A RECORD OF THE LOCATION OF ALL FIELD TILE OR DRAIN PIPE ENCOUNTERED SHALL BE KEPT BY THE CONTRACTOR AND TURNED OVER TO THE OWNER AND/OR ENGINEER UPON COMPLETION OF THE PROJECT AND ACCURATELY SHOWN ON THE RECORD DRAWINGS.

SANITARY SEWER NOTES:

- ALL SANITARY SEWER CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE NOTES IN THE PLANS AND THE STANDARDS, SPECIFICATIONS, CODES AND ORDINANCES OF THE LOCAL GOVERNING AUTHORITIES. IN CASE OF CONFLICT, THE MORE STRINGENT CODE SHALL TAKE PRECEDENCE.
- ALL SANITARY SEWER PIPE AND STRUCTURES SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH LOCAL REQUIREMENTS AND SPECIFICATIONS.
- ALL SANITARY SEWER PIPE SHALL BE POLYVINYL CHLORIDE (PVC) SDR 35 PIPE PER ASTM D3034 WITH WATERTIGHT JOINTS CONFORMING TO ASTM D3212, UNLESS OTHERWISE NOTED.
 - WHERE SANITARY SEWER PIPE IS NOTED AS PVC C900, THE PIPE SHALL BE IN ACCORDANCE WITH AMERICAN WATER WORKS ASSOCIATION (AWWA) C900 WITH WATERTIGHT, PRESSURE RATED JOINTS CONFORMING TO ASTM D3139.
- SANITARY SEWER CONSTRUCTION SHALL COMMENCE AT THE EXISTING MANHOLE(S) AND/OR CONNECTION POINT(S) INDICATED ON THE PLANS.
 - A WATERTIGHT PLUG SHALL BE INSTALLED AND LEFT IN PLACE AT THE POINT OF COMMENCEMENT UNTIL THE REMAINDER OF THE PROPOSED SEWERS HAVE BEEN CONSTRUCTED, PROPERLY TESTED AND DEEMED READY FOR FINAL ACCEPTANCE.
- ALL SANITARY SEWER TRENCH EXCAVATIONS AND PIPE FOUNDATION, BEDDING AND HAUNCHING SHALL BE CONSTRUCTED IN ACCORDANCE WITH LOCAL REQUIREMENTS AND SPECIFICATIONS.
 - ALL SANITARY SEWERS MUST BE PLACED ON PROPERLY COMPACTED STONE BEDDING. PIPE BEDDING MATERIAL SHALL BE A MINIMUM OF FOUR (4) INCHES THICK UNDER THE BARREL OF THE PIPE AND FOR PVC PIPE, MATERIAL SHALL BE EXTENDED A MINIMUM OF 12" OVER THE TOP OF THE PIPE PER ASTM D2321. PIPE BEDDING MATERIAL SHALL BE CRUSHED GRAVEL OR STONE MEETING LOCAL STANDARD GRADATIONS.
 - TRENCH BACKFILL MATERIAL SHALL BE PLACED AND COMPACTED TO A MINIMUM OF 98% STANDARD PROCTOR MAXIMUM DRY DENSITY, PER ASTM D698, OVER ALL SANITARY SEWERS WHICH ARE CONSTRUCTED UNDER, OR WITHIN TWO (2) FEET OF, ANY PROPOSED OR EXISTING PAVEMENT, PARKING LOTS OR SIDEWALKS.
- THE CONTRACTOR IS REQUIRED TO RECORD THE LOCATION OF ALL SEWERS AND FURNISH THE INFORMATION TO THE PROJECT ENGINEER AND/OR OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL LOCATE ALL SEWERS BY MEASUREMENTS TO LOT CORNERS OR OTHER PERMANENT SITE FEATURE AND SHALL FURNISH A COPY OF SUCH LOCATIONS TO THE PROJECT ENGINEER AND/OR OWNER'S REPRESENTATIVE UPON PROJECT COMPLETION. THIS INFORMATION SHALL ALSO INCLUDE THE DEPTH OF EACH SEWER. IF THE CONTRACTOR FAILS TO PROPERLY LOCATE ANY SEWER, HE SHALL BE RESPONSIBLE FOR ALL COSTS WHICH ARE INCURRED AS A RESULT OF THE IMPROPERLY LOCATED UTILITIES.
- SANITARY SEWER MANHOLES SHALL BE PRECAST CONCRETE AND SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE DETAILS IN THE PLANS.
 - A FLEXIBLE TYPE JOINT SHALL BE FURNISHED AT POINTS OF ENTRY INTO AND EXITING FROM MANHOLE STRUCTURES AND SHALL BE OF A DESIGN APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. THIS FLEXIBLE JOINT MAY CONSIST OF A SLEEVE OF HIGH QUALITY SYNTHETIC RUBBER WITH A SUBSTANTIAL SERRATED FLANGE WHICH IS CAST DIRECTLY INTO THE WALL OF THE MANHOLE BASE TO FORM A WATERTIGHT SEAL AND PROTRUDES OUTSIDE OF THE MANHOLE WALL TO CONNECT WITH THE PIPE ENTERING/EXITING THE MANHOLE. WHEN THIS TYPE OF FLEXIBLE JOINT IS USED, THE SLEEVE SHALL SLIP OVER THE END OF THE PIPE ADJACENT TO THE MANHOLE BASE AND SHALL BE SECURED BY MEANS OF A STAINLESS STEEL STRAP CLAMP EQUIPPED WITH A DRAW BOLT AND NUT.
- REQUIRED MANHOLE RIM ADJUSTMENTS SHALL BE MADE WITH PRECAST CONCRETE ADJUSTING RINGS NOT TO EXCEED A MAXIMUM OF EIGHT (8) INCHES IN OVERALL HEIGHT. A MAXIMUM OF TWO (2) ADJUSTING RINGS ARE ALLOWED. BUTYROPE JOINT SEALANT SHALL BE USED ON ALL JOINTS BETWEEN THE PRECAST ELEMENTS.

SANITARY SEWER NOTES (continued):

- AFTER FINAL ADJUSTMENTS HAVE BEEN MADE, ALL JOINTS IN PRECAST STRUCTURES SHALL BE MORTARED. THE MORTAR SHALL BE COMPOSED OF ONE (1) PART CEMENT TO THREE (3) PARTS SAND, BY VOLUME, BASED ON DRY MATERIALS, AND SHALL BE THOROUGHLY WETTED BEFORE LAYING.
- WHEN CONNECTING TO AN EXISTING SEWER MAIN BY MEANS OTHER THAN AN EXISTING WYE, TEE, OR MANHOLE, THE FOLLOWING METHOD SHALL BE USED:
 - CIRCULAR SAW-CUT OF SEWER MAIN BY PROPER TOOLS ("SEWER-TAP" MACHINE OR SIMILAR) AND PROPER INSTALLATION OF HUB-WYE SADDLE OR HUB-TEE SADDLE.
- UPON COMPLETION OF THE SANITARY SEWER CONSTRUCTION, INCLUDING THE SERVICE LINES, ALL SEWERS SHALL BE TESTED IN ACCORDANCE WITH SECTIONS LOCAL REQUIREMENTS AND SPECIFICATIONS AND SHALL BE WITNESSED BY THE LOCAL GOVERNING AUTHORITY OR AUTHORIZED REPRESENTATIVE.

WATER MAIN AND WATER SERVICE NOTES:

- ALL WATER MAIN CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE NOTES IN THE PLANS AND THE STANDARDS, SPECIFICATIONS, CODES AND ORDINANCES OF THE LOCAL GOVERNING AUTHORITIES. IN CASE OF CONFLICT, THE MORE STRINGENT CODE SHALL TAKE PRECEDENCE.
- WATER MAIN PIPE AND STRUCTURES SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH LOCAL REQUIREMENTS AND SPECIFICATIONS.
- WATER MAIN SHALL BE DUCTILE IRON PIPE, CLASS 53 IN ACCORDANCE WITH AMERICAN WATER WORKS ASSOCIATION (AWWA) STANDARDS C151, C111 AND C104, UNLESS OTHERWISE NOTED PVC C900.
- UNLESS OTHERWISE NOTED ON THE PLANS, ALL WATER MAIN PIPE SHALL BE LAID WITH A MINIMUM COVER OF FIVE (5) FEET FROM THE PROPOSED FINISH GRADE INDICATED ON THE PLANS OR THE SPECIFIC TOP OF PIPE ELEVATION INDICATED ON THE PLANS FOR THE WATER MAIN. NO BERMS ARE ALLOWED OVER WATER MAINS EXCLUSIVELY FOR THE PURPOSE OF OBTAINING ADEQUATE GROUND COVER.
- DUCTILE IRON WATER MAIN PIPE SHALL BE CONSTRUCTED WITH A MINIMUM OF 8-MIL POLYETHYLENE ENCASEMENT TO PREVENT CORROSION.
 - WATER MAINS MUST BE PLACED ON PROPERLY COMPACTED STONE BEDDING. PIPE BEDDING MATERIAL SHALL BE A MINIMUM OF FOUR (4) INCHES THICK UNDER THE BARREL OF THE PIPE. PIPE BEDDING MATERIAL SHALL BE CRUSHED GRAVEL OR STONE MEETING LOCAL STANDARD GRADATIONS.
 - TRENCH BACKFILL MATERIAL SHALL BE PLACED AND COMPACTED TO A MINIMUM OF 98% STANDARD PROCTOR MAXIMUM DRY DENSITY, PER ASTM D698, OVER ALL WATER MAINS WHICH ARE CONSTRUCTED UNDER, OR WITHIN TWO (2) FEET OF, ANY PROPOSED OR EXISTING PAVEMENT, PARKING LOTS OR SIDEWALKS.
- A WATERTIGHT PLUG SHALL BE PLACED IN THE END OF THE WATER MAIN PIPE AT THE END OF EACH CONSTRUCTION DAY.
- UPON COMPLETION OF THE WATERMAIN CONSTRUCTION, ALL WATER MAIN SHALL BE TESTED IN ACCORDANCE WITH THE FOLLOWING MINIMUM STANDARDS:
 - HYDROSTATIC PRESSURE AND LEAKAGE TESTS IN ACCORDANCE WITH LOCAL REQUIREMENTS AND SPECIFICATIONS AND SHALL BE WITNESSED BY THE LOCAL GOVERNING AUTHORITY.
 - DISINFECTION IN ACCORDANCE WITH LOCAL REQUIREMENTS AND THE METHODS STATED IN AWWA STANDARD C651 AND WITNESSED BY THE LOCAL GOVERNING AUTHORITY.
- WATER SERVICE PIPING AND STRUCTURES SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH LOCAL REQUIREMENTS AND SPECIFICATIONS.
- WATER SERVICE LINES 2" IN DIAMETER OR SMALLER SHALL BE TYPE 'K' COPPER TUBING CONFORMING TO ASTM B88-14. NO COUPLINGS SHALL BE PERMITTED BETWEEN THE CORPORATION AND CURB STOPS OR BETWEEN THE CURB STOP AND THE BUILDING.
- WATER SERVICE FITTINGS INCLUDING CORPORATION STOPS, SERVICE BOXES AND BUFFALO BOXES SHALL BE FURNISHED IN ACCORDANCE WITH LOCAL REQUIREMENTS AND SPECIFICATIONS.
- SERVICE BOXES SHALL BE OF SUFFICIENT LENGTH TO PERMIT THE TOP TO BE INSTALLED FLUSH WITH THE FINISHED GRADE. EACH SERVICE BOX SHALL BE PROVIDED WITH A CAP WITH THE WORD "WATER" CAST IN THE TOP.
- VALVES, VALVE BOXES OR VAULTS SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH LOCAL REQUIREMENTS.
- PRESSURE CONNECTIONS TO THE EXISTING WATER MAIN SHALL BE CONSTRUCTED IN ACCORDANCE WITH LOCAL REQUIREMENTS AND SPECIFICATIONS AND SHALL INCLUDE THE INSTALLATION OF A FULL STAINLESS STEEL TAPPING SADDLE.
- VALVE VAULTS SHALL HAVE A MINIMUM DIAMETER OF FIVE (5) FEET BELOW THE PRECAST CONCRETE CONE SECTION. THE VAULTS SHALL BE CONSTRUCTED OF PRECAST CONCRETE SECTIONS AND SHALL CONFORM TO THE DETAILS SPECIFIED ON THE PLANS. ALL VALVE VAULTS SHALL BE LEAK PROOF.
- TEMPORARY CONNECTIONS FOR CONSTRUCTION PURPOSES TO NEWLY INSTALLED OR EXISTING WATER MAINS SHALL BE MADE AND METERED IN ACCORDANCE WITH LOCAL REQUIREMENTS.
- REQUIRED RIM ADJUSTMENTS SHALL BE MADE WITH PRECAST CONCRETE ADJUSTING RINGS NOT TO EXCEED A MAXIMUM OF SIX (6) INCHES IN OVERALL HEIGHT. A MAXIMUM OF TWO (2) ADJUSTING RINGS ARE ALLOWED. BUTYROPE JOINT SEALANT SHALL BE USED ON ALL JOINTS BETWEEN THE PRECAST ELEMENTS.
- BENDS ON 4" AND GREATER WATER LINES SHALL BE PROVIDED WITH RESTRAINED JOINT. (MEGALUG SERIES 2000 OR APPROVED EQUAL)
- WATER MAIN SHALL BE DUCTILE IRON PIPE, CLASS 53 IN ACCORDANCE WITH AMERICAN WATER WORKS ASSOCIATION (AWWA) STANDARDS C151, C111 AND C104, UNLESS OTHERWISE NOTED.

CITY OF WICHITA CONSTRUCTION DETAILS NOTE:

ALL CONSTRUCTION MATERIALS AND SITE WORK INDICATED ON THESE PLANS SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE CITY OF WICHITA SPECIFICATIONS AND STANDARD CONSTRUCTION DETAILS. IN THE EVENT OF A CONFLICT WITH ANY NOTES OR DETAILS CONTAINED WITHIN THE PLANS, THE CITY OF WICHITA CONSTRUCTION STANDARDS SHALL TAKE PRECEDENCE.

WATER AND SEWER SEPARATION NOTES:

- WATER MAINS SHALL BE LOCATED AT LEAST TEN (10) FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED DRAIN, STORM SEWER, SANITARY SEWER, COMBINED SEWER, OR SEWER SERVICE CONNECTION.
 - WATER MAINS MAY BE LOCATED CLOSER THAN TEN (10) FEET TO A SEWER LINE WHEN:
 - LOCAL CONDITIONS PREVENT A LATERAL SEPARATION OF TEN (10) FEET; AND
 - THE WATER MAIN INVERT IS AT LEAST EIGHTEEN (18) INCHES ABOVE THE CROWN OF THE SEWER; AND
 - THE WATER MAIN IS EITHER IN A SEPARATE TRENCH OR IN THE SAME TRENCH ON AN UNDISTURBED EARTH SHELF LOCATED TO ONE SIDE OF THE SEWER.
- WHEN IT IS IMPOSSIBLE TO MEET 1) OR 2) ABOVE, BOTH THE WATER MAIN AND DRAIN OR SEWER SHALL BE CONSTRUCTED OF SLIP-ON OR MECHANICAL JOINT CAST OR DUCTILE IRON PIPE, PRE-STRESSED CONCRETE PIPE, OR PVC PIPE EQUIVALENT TO WATER MAIN STANDARDS OF CONSTRUCTION. THE DRAIN OR SEWER SHALL BE PRESSURE TESTED FOR THE MAXIMUM EXPECTED SURCHARGE HEAD PRIOR TO BACKFILLING.
- WATER MAINS SHALL BE SEPARATED FROM A SEWER SO THAT ITS INVERT IS A MINIMUM OF EIGHTEEN (18) INCHES ABOVE THE CROWN OF THE DRAIN OR SEWER WHENEVER WATER MAINS CROSS STORM SEWERS, SANITARY SEWERS, OR SEWER SERVICE CONNECTIONS. THE VERTICAL SEPARATION SHALL BE MAINTAINED FOR THAT PORTION OF THE WATER MAIN LOCATED WITHIN TEN (10) FEET HORIZONTALLY OF ANY SEWER OR DRAIN CROSSED. A LENGTH OF WATER MAIN PIPE SHALL BE CENTERED OVER THE SEWER TO BE CROSSED WITH JOINTS EQUIDISTANT FROM THE SEWER OR DRAIN.
- BOTH THE WATER MAIN AND SEWER SHALL BE CONSTRUCTED OF SLIP-ON OR MECHANICAL JOINT CAST OR DUCTILE IRON PIPE, PRE-STRESSED CONCRETE PIPE, OR PVC PIPE EQUIVALENT TO WATER MAIN STANDARDS OF CONSTRUCTION WHEN:
 - IT IS IMPOSSIBLE TO OBTAIN THE PROPER VERTICAL SEPARATION AS DESCRIBED IN 4) ABOVE; OR THE WATER MAIN PASSES UNDER A SEWER OR DRAIN
- A VERTICAL SEPARATION OF TWENTY FOUR (24) INCHES BETWEEN THE INVERT OF THE SEWER OR DRAIN AND THE CROWN OF THE WATER MAIN SHALL BE MAINTAINED WHERE A WATER MAIN CROSSES UNDER A SEWER. THE SEWER OR DRAIN LINES SHALL BE SUPPORTED TO PREVENT SETTLING AND BREAKING OF THE WATER MAIN, AS SHOWN ON THE PLANS OR AS APPROVED BY THE ENGINEER.
- CONSTRUCTION SHALL EXTEND ON EACH SIDE OF THE CROSSING UNTIL THE PERPENDICULAR DISTANCE FROM THE WATER MAIN TO THE SEWER OR DRAIN LINE IS AT LEAST TEN (10) FEET.
- ALL CLEARANCES SHOULD BE 10 FEET WHEN RUNNING PARALLEL AND 2 FEET WHEN CROSSING. ANY/ALL PROTECTION SHOULD FOLLOW KHDE REQUIREMENTS.

EXISTING LEGEND:

- MONUMENT FOUND, ORIGIN UNKNOWN UNLESS OTHERWISE NOTED
- CHISELED "X" SET
- 1/2" x 24" REBAR W/KVE CLS 20 CAP SET
- × CHISELED "X" FOUND
- (P) PLATTED
- (D) DESCRIBED
- STREET SIGN
- ROADWAY MARKER
- STEEL BOLLARD
- UTILITY POLE W/ LIGHT
- ☆ LIGHT POLE
- (1) OP — OVERHEAD POWER LINE - # LINES
- E — UNDERGROUND ELECTRIC LINE
- ELECTRIC TRANSFORMER
- G — UNDERGROUND GAS LINE
- W — WATER LINE
- ⊗ WATER LINE GATE VALVE
- ⊞ SPRINKLER CONTROL BOX
- ☪ FIRE HYDRANT
- S — SANITARY SEWER LINE
- ⊙ STORM SEWER MANHOLE
- TELEPHONE PEDESTAL
- T — UNDERGROUND TELEPHONE LINE
- ↖ LEFT TURN ARROW
- 18" DECIDUOUS TREE W/SIZE & DRIPLINE
- 10" EVERGREEN TREE W/SIZE & DRIPLINE
- PARKING STALL COUNT
- 1343 — 1' CONTOUR INTERVAL
- XXXX SPOT ELEVATION AT TOP AND FLOWLINE OF CURB (ADD XXXX)
- x xxxxxx SPOT ELEVATION AT GROUND/PAVEMENT
- B/B BACK OF CURB TO BACK OF CURB
- A POTENTIAL ENCROACHMENT IDENTIFIER
- 9 SCHEDULE B IDENTIFIER
- LINE NOT DRAWN TO SCALE

GreenbergFarrow

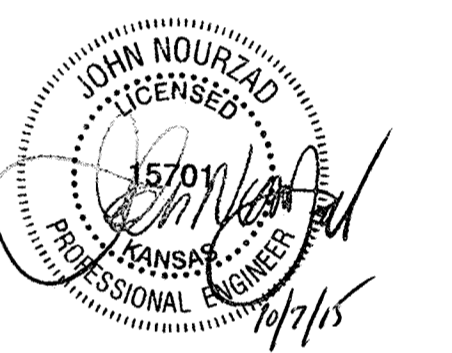
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PROFESSIONAL SEAL



PROFESSIONAL IN CHARGE

JOHN NOURZAD
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PROJECT MANAGER

BRIAN OLESEN

QUALITY CONTROL

LARRY DIEHL

DRAWN BY

PETA STOYANOVA-POUHALEVA

PROJECT NAME

BUBBA'S 33

WICHITA KANSAS

412 S. TOWNE EAST DRIVE



PROJECT NUMBER
201405680.0

SHEET TITLE
GENERAL NOTES

SHEET NUMBER

C1.0

DEMOLITION PLAN LEGEND:

- PROPERTY LINE
- - - PROPOSED SAW CUT LINE
- X = X EXISTING CURB TO BE REMOVED
- X = X EXISTING CURB AND GUTTER TO BE REMOVED
- X = X EXISTING STORM SEWER TO BE REMOVED
- x - x - PROPOSED CONSTRUCTION FENCE (SUGGESTED LOCATION)
- L UTILITY LINE CAP LOCATION

NOTE: SEE GENERAL NOTES SHEET C1.0 FOR EXISTING LEGEND

DEMOLITION HATCH LEGEND:

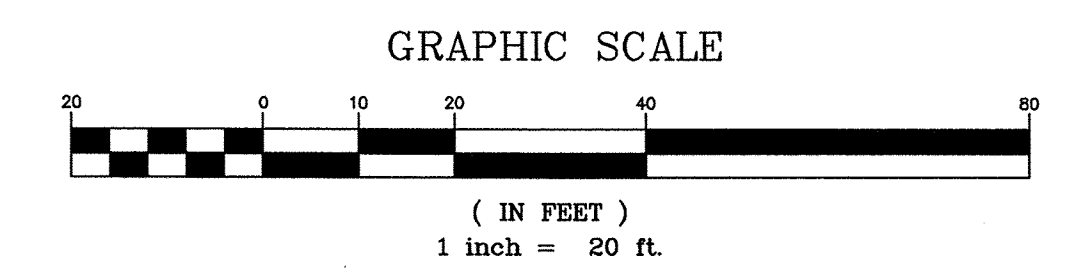
- [Hatched Box] EXISTING CONCRETE PAVEMENT TO BE REMOVED
- [Hatched Box] EXISTING GRAVEL TO BE REMOVED
- [Hatched Box] EXISTING ASPHALT PAVEMENT TO BE REMOVED

GENERAL DEMOLITION NOTES:

- CONTRACTOR SHALL CONTACT STATE ONE CALL SERVICE (811 OR 1-800-344-7233) AND/OR PRIVATE LOCATING SYSTEM TO LOCATE ALL UNDERGROUND UTILITY LINES PRIOR TO STARTING ANY DEMOLITION AND/OR EXCAVATION. EXACT LOCATIONS OF ANY EXISTING ELECTRIC, GAS, TELEPHONE, ETC. LINES ARE UNKNOWN.
- CONTRACTOR SHALL PERFORM ALL DEMOLITION WORK IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REQUIREMENTS.
- CONTRACTOR SHALL OBTAIN ALL NECESSARY DEMOLITION PERMITS AND COORDINATE ALL DEMOLITION WORK WITH THE MUNICIPALITY AND OWNERS REPRESENTATIVE TO ENSURE PROTECTION AND MAINTENANCE OF EXISTING SITE FEATURES NOT NOTED FOR REMOVAL.
- ALL EROSION AND SEDIMENTATION CONTROL MEASURES AND DEVICES SHALL BE INSTALLED AND FUNCTIONAL BEFORE THE SITE IS OTHERWISE DISTURBED. THEY SHALL BE KEPT OPERATIONAL AND MAINTAINED CONTINUOUSLY THROUGHOUT THE PERIOD OF LAND DISTURBANCE UNTIL PERMANENT SITE STABILIZATION HAS BEEN ACHIEVED (SEE STORMWATER POLLUTION PREVENTION PLAN FOR ADDITIONAL INFORMATION AND DETAILS).
- THE PURPOSE OF THIS DRAWING IS TO CONVEY THE OVERALL SCOPE OF DEMOLITION WORK AND IT IS NOT INTENDED TO COVER ALL DETAILS OR SPECIFICATIONS REQUIRED TO COMPLY WITH GENERALLY ACCEPTED DEMOLITION PRACTICES. CONTRACTOR SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH THE SITE, SCOPE OF WORK, AND ALL EXISTING CONDITIONS AT THE JOB SITE PRIOR TO BIDDING AND COMMENCING THE WORK. THE DEMOLITION CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MEANS, METHODS, TECHNIQUES, OR PROCEDURES USED TO COMPLETE THE WORK IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND IS LIABLE FOR THE SAFETY OF THE PUBLIC AND CONTRACTOR'S EMPLOYEES DURING THE COURSE OF THE PROJECT.
- THE DEMOLITION PLAN IS INTENDED TO SHOW REMOVAL OF KNOWN SITE FEATURES AND UTILITIES AS SHOWN ON THE SURVEY PROVIDED TO THE ENGINEER FOR DESIGN. THERE MAY BE OTHER SITE FEATURES, UTILITIES, STRUCTURES, AND MISCELLANEOUS ITEMS BOTH BURIED AND ABOVE GROUND THAT ARE WITHIN THE LIMITS OF WORK THAT MAY REQUIRE REMOVAL FOR THE PROPOSED SITE IMPROVEMENTS BUT THAT ARE NOT SHOWN HEREON. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF SUCH ITEMS AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL CONTACT THE RESPECTIVE UTILITY COMPANIES PRIOR TO COMMENCING ANY SITE DEMOLITION OPERATIONS TO COORDINATE DISCONNECTION AND REMOVAL OF EXISTING UTILITIES WITHIN THE PROPOSED AREA OF WORK. CONTRACTOR SHALL ALSO CONTACT CAITLIN DAWSON WITH TEXAS ROADHOUSE (502-855-5556 OR CAITLIN.DAWSON@TEXASROADHOUSE.COM) TO COORDINATE DISCONNECTION OF THE EXISTING BUILDING TELEPHONE SERVICE.
- CONTRACTOR SHALL COORDINATE ANY SHUT DOWNS OF EXISTING ROADWAYS AND UTILITIES WITH THE NECESSARY GOVERNING AUTHORITIES.
- ALL EXISTING BUILDINGS, FOUNDATIONS, CONCRETE OR ASPHALT PAVEMENT OR WALKS, CURB AND GUTTER AND MISCELLANEOUS STRUCTURES (INCLUDING, BUT NOT LIMITED TO FENCES, POLES, YARD LIGHTS, ELECTRICAL PANELS, WHEEL STOPS AND MISCELLANEOUS DEBRIS) NOTED TO BE REMOVED SHALL BE DEMOLISHED, REMOVED FROM THE SITE AND LEGALLY DISPOSED OF BY THE CONTRACTOR.
- VOIDS LEFT BY ANY ITEM REMOVED UNDER ANY PROPOSED BUILDINGS, PAVEMENTS, OR WALKS OR WITHIN 24" THEREOF SHALL BE BACKFILLED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND GEOTECHNICAL REPORT.
- AS SOON AS DEMOLITION WORK HAS BEEN COMPLETED, FINAL GRADE OF BACKFILL IN DEMOLITION AREAS SHALL BE COMPACTED PER THE GEOTECHNICAL REPORT TO PRESENT A NEAT, WELL DRAINED APPEARANCE, AND TO PREVENT WATER FROM DRAINING UNNECESSARILY ONTO ADJACENT PROPERTIES. CONTRACTOR SHALL PROVIDE TEMPORARY DIVERSION SWALES OR OTHER MEANS OF MAINTAINING ADEQUATE SITE DRAINAGE.
- ALL EXISTING TREES SHOWN ARE TO REMAIN UNLESS OTHERWISE NOTED (REFER TO LANDSCAPE PLANS FOR ALL LANDSCAPING REMOVAL REQUIREMENTS).
- ALL EXISTING TREES, BRUSH AND MISCELLANEOUS VEGETATION NOTED TO BE REMOVED SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR (REFER TO LANDSCAPE PLANS FOR ALL LANDSCAPING REMOVAL REQUIREMENTS).
- CONTRACTOR SHALL UTILIZE CARE WHEN WORKING NEAR EXISTING UTILITIES TO REMAIN. ANY DAMAGE TO EXISTING UTILITIES NOT NOTED TO BE REMOVED SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE AND TO THE SATISFACTION OF THE OWNER AND/OR ENGINEER.
- CONTRACTOR SHALL REPAIR AT HIS EXPENSE ANY DAMAGE TO EXISTING ASPHALT, CONCRETE, CURBS, SIDEWALKS, ETC. RESULTING FROM CONSTRUCTION TRAFFIC AND/OR OPERATIONS. REPAIRS SHALL BE MADE TO THE SATISFACTION OF THE OWNER AND/OR ENGINEER.
- ALL FIRE ACCESS LANES WITHIN THE PROJECT AREA SHALL REMAIN IN SERVICE, CLEAN OF DEBRIS, AND ACCESSIBLE FOR USE BY EMERGENCY VEHICLES.
- ALL EXISTING SANITARY SEWERS, STORM SEWERS, WATER MAINS OR IRRIGATION LINES AND APPURTENANCES NOTED FOR REMOVAL WITHIN THE AREA OF THE PROPOSED CONSTRUCTION SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR. ALL ABANDONED SEWER LINES SHALL BE PLUGGED AT BOTH ENDS WITH A MINIMUM OF TWO (2) FEET LONG NON-SHRINK CONCRETE MORTAR PLUGS UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL MAKE NECESSARY ARRANGEMENTS TO HAVE RECYCLABLE MATERIALS REMOVED FROM THE SITE AND RECYCLED.
- SEE GENERAL NOTES SHEET FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

DEMOLITION KEY NOTES:

- | | |
|--|--|
| D1 SAW CUT EXISTING ASPHALT PAVEMENT | D33 APPROXIMATE LOCATION OF EXISTING OVERHEAD POWER LINE TO REMAIN |
| D2 SAW CUT EXISTING CONCRETE CURB | D34 EXISTING LIGHT POLE TO REMAIN |
| D3 EXISTING CONCRETE PAVEMENT TO BE REMOVED | D35 EXISTING SANITARY STRUCTURE TO REMAIN |
| D4 EXISTING GRAVEL TO BE REMOVED | D36 EXISTING SANITARY SEWER LINE TO REMAIN |
| D5 EXISTING ASPHALT PAVEMENT TO BE REMOVED | D37 EXISTING SIGN TO REMAIN |
| D6 EXISTING CONCRETE CURB TO BE REMOVED | D38 EXISTING ASPHALT PAVEMENT TO REMAIN |
| D7 EXISTING CONCRETE CURB AND GUTTER TO BE REMOVED | D39 EXISTING CONCRETE PAVEMENT TO REMAIN |
| D8 PROPOSED CONSTRUCTION FENCE | D40 EXISTING STORM SEWER STRUCTURE TO REMAIN |
| D9 EXISTING WOOD FENCE TO BE REMOVED | D41 EXISTING STORM SEWER LINE TO REMAIN |
| D10 EXISTING SANITARY SEWER TO BE REMOVED. CONTRACTOR SHALL PLUG MANHOLE PER LOCAL CODES | D42 APPROXIMATE LOCATION OF EXISTING TELEPHONE LINE TO REMAIN |
| D11 SAW CUT EXISTING CONCRETE PAVEMENT | D43 EXISTING TREE TO REMAIN |
| D12 EXISTING LIGHT TO BE REMOVED | D44 APPROXIMATE LOCATION OF EXISTING WATER LINE TO REMAIN |
| D28 EXISTING ELECTRIC TRANSFORMER LOCATION | D45 EXISTING WATER VALVE TO REMAIN |
| D29 EXISTING ELECTRICAL LINE TO REMAIN | D46 EXISTING FIRE HYDRANT TO REMAIN |
| D30 EXISTING CONCRETE SIDEWALK AND RAMPS TO REMAIN | |
| D31 EXISTING CONCRETE CURB AND GUTTER TO REMAIN | |
| D32 APPROXIMATE LOCATION OF EXISTING GAS LINE TO REMAIN | |

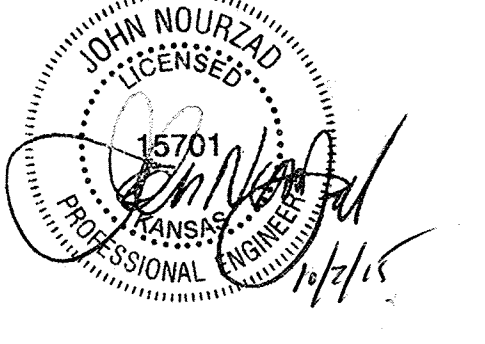


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PROFESSIONAL SEAL



PROFESSIONAL IN CHARGE
JOHN NOURZAD
 PROFESSIONAL ENGINEER
 LICENSE NO. 15701

PROJECT MANAGER
 BRIAN OLESEN

QUALITY CONTROL
 LARRY DIEHL

DRAWN BY
 PETIA STOYANOVA-POUHALEVA

PROJECT NAME

BUBBA'S 33

WICHITA KANSAS
 412 S. TOWNE EAST DRIVE



PROJECT NUMBER
 201405680.0

SHEET TITLE
DEMOLITION PLAN

SHEET NUMBER
C2.0

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WICHITA KANSAS

412 S. TOWNE EAST DRIVE



PROJECT NUMBER
201405680.0

SHEET TITLE
SITE PLAN

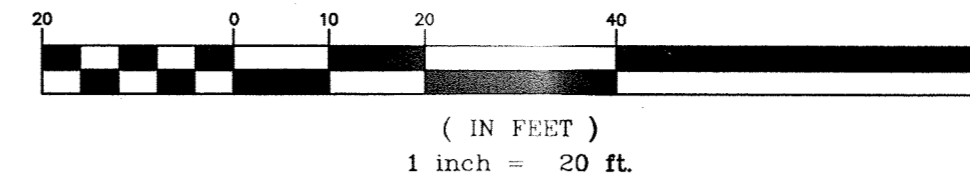
SHEET NUMBER
C3.0

PROPOSED LEGEND:

- PROPERTY LINE
- PROPOSED CONCRETE CURB AND GUTTER
- PROPOSED REVERSE PITCH CURB AND GUTTER
- PROPOSED DEPRESSED CURB AND GUTTER
- PROPOSED PARKING STALL COUNT
- PROPOSED CONCRETE WHEEL STOP
- PROPOSED SIGN
- PROPOSED PYLON SIGN
- PROPOSED LIGHT POLE
- PROPOSED STORM SEWER STRUCTURES
- PROPOSED SANITARY SEWER STRUCTURES
- PROPOSED SANITARY SEWER GREASE INTERCEPTOR
- PROPOSED FIRE HYDRANT
- PROPOSED FIRE DEPARTMENT CONNECTION (FDC)
- PROPOSED WATER METER AND VAULT
- PROPOSED GATE VALVE AND VALVE BOX
- PROPOSED WATER SERVICE TAP
- PROPOSED TRANSFORMER PAD AND STEEL BOLLARDS
- PROPOSED GAS METER
- PROPOSED ELECTRIC METER, CT CABINET AND DISCONNECT

NOTE: SEE GENERAL NOTES SHEET C1.0 FOR EXISTING LEGEND

GRAPHIC SCALE



GENERAL SITE NOTES:

- CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SAFE AND ADEQUATE WORKING CONDITIONS THROUGHOUT THE DURATION OF CONSTRUCTION OF THE PROPOSED SITE IMPROVEMENTS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL SITE SETBACKS, EASEMENTS AND DIMENSIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE LATEST STATE AND LOCAL GOVERNMENT CONSTRUCTION STANDARDS AND SPECIFICATIONS.
- ALL HANDICAP ACCESSIBLE SITE IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL CODES AND REQUIREMENTS.
- IF DURING THE COURSE OF CONSTRUCTION THE CONTRACTOR FINDS ANY DISCREPANCIES OR CONFLICTS BETWEEN THE PROPOSED SITE IMPROVEMENTS INDICATED ON THE PLANS AND THE PHYSICAL CONDITIONS OF THE SITE, OR ANY ERRORS OR OMISSIONS WITHIN THE PLANS OR IN THE SITE LAYOUT AS PROVIDED BY THE ENGINEER, HE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO IMMEDIATELY NOTIFY THE ENGINEER, UNTIL AUTHORIZED TO PROCEED, ANY WORK PERFORMED BY THE CONTRACTOR AFTER SUCH A DISCOVERY WILL BE AT THE CONTRACTOR'S SOLE RISK AND EXPENSE.
- CONTRACTOR SHALL COORDINATE ALL SITE IMPROVEMENTS WITH ARCHITECTURAL PLANS. ARCHITECTURAL PLANS SHALL BE USED FOR BUILDING STAKEOUT.
- CONTRACTOR SHALL COORDINATE ALL LANDSCAPE IMPROVEMENTS, INCLUDING NEW PLANTINGS AND TURF AREA RESTORATION REPAIRS, WITH LANDSCAPE PLANS.
- CONSTRUCTION SURVEY AND STAKEOUT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL DIMENSIONS SHOWN ARE MEASURED FROM FACE OF CURB TO FACE OF CURB OR EDGE OF PAVEMENT TO EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
- ALL CURB RADII ARE MEASURED AT THE FACE OF CURB UNLESS OTHERWISE NOTED.
- ALL NEW ASPHALT AND/OR CONCRETE PAVING SHALL MATCH EXISTING PAVEMENTS FLUSH.
- CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS OUTSIDE OF CONSTRUCTION LIMITS TO ORIGINAL CONDITION OR BETTER.
- CONTRACTOR SHALL REPAIR AT HIS EXPENSE ANY DAMAGE TO EXISTING ASPHALT, CONCRETE, CURBS, SIDEWALKS, ETC. RESULTING FROM CONSTRUCTION TRAFFIC AND/OR OPERATIONS. REPAIRS SHALL BE MADE TO THE SATISFACTION OF THE OWNER AND/OR ENGINEER.
- ALL FIRE ACCESS LANES WITHIN THE PROJECT AREA SHALL REMAIN IN SERVICE, CLEAN OF DEBRIS, AND ACCESSIBLE FOR USE BY EMERGENCY VEHICLES.
- ALL DETECTIBLE WARNING PLATES SHALL BE PREFORMED PLASTIC INSERTS UNLESS OTHERWISE NOTED.
- SEE GENERAL NOTES SHEET FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

SITE KEY NOTES:

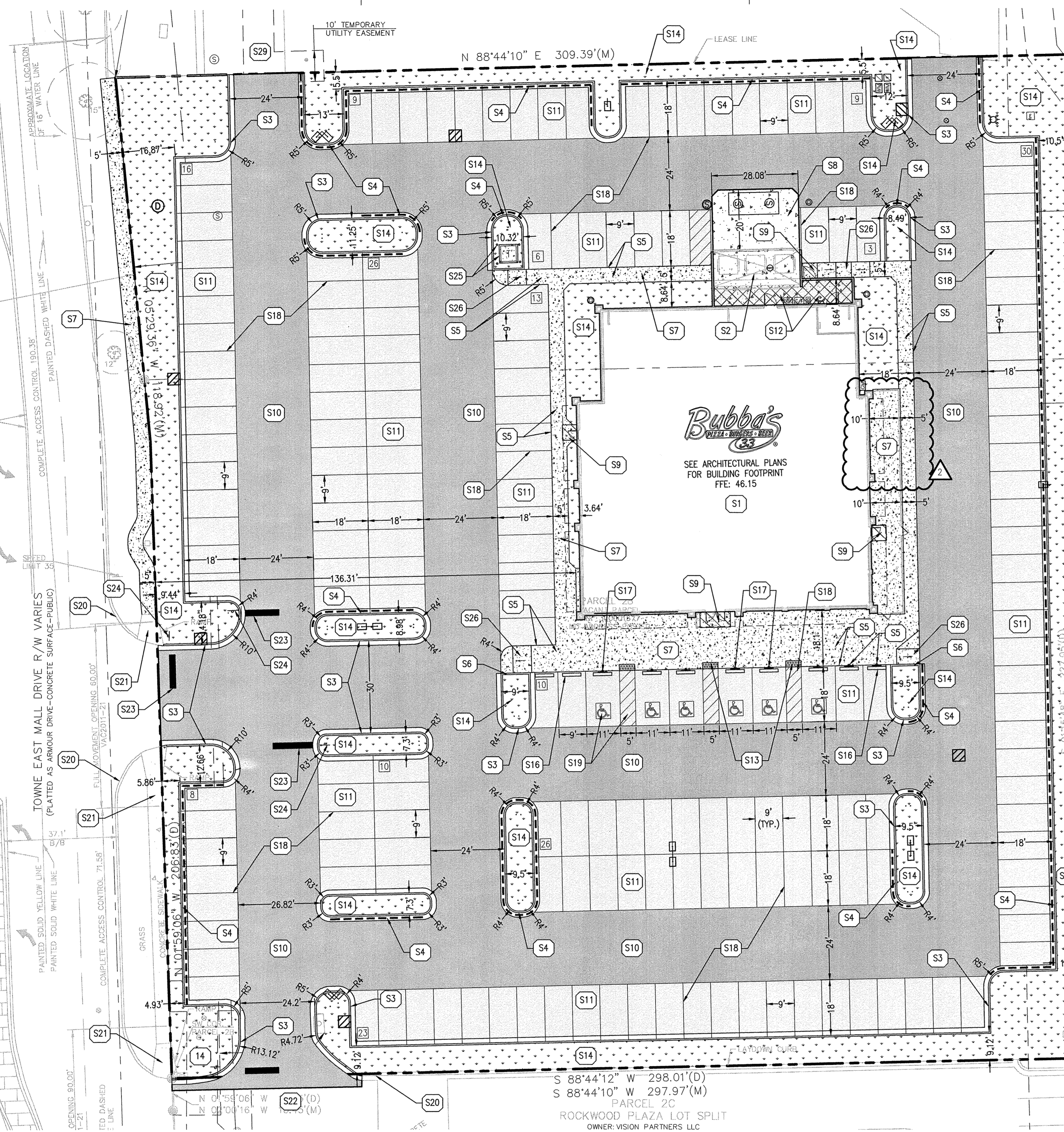
- S1 PROPOSED BUBBA'S 33 BUILDING (SEE ARCHITECTURAL AND STRUCTURAL PLANS FOR ADDITIONAL INFORMATION AND DETAILS)
- S2 PROPOSED TRASH ENCLOSURE (SEE ARCHITECTURAL AND STRUCTURAL PLANS FOR ADDITIONAL INFORMATION AND DETAILS)
- S3 PROPOSED CONCRETE CURB AND GUTTER
- S4 PROPOSED REVERSE PITCH CONCRETE CURB AND GUTTER
- S5 PROPOSED MONOLITHIC CONCRETE CURB AND SIDEWALK
- S6 PROPOSED CONCRETE BARRIER CURB
- S7 PROPOSED 5" CONCRETE SIDEWALK
- S8 PROPOSED HEAVY DUTY CONCRETE PAVEMENT
- S9 PROPOSED CONCRETE LANDING (SEE STRUCTURAL PLANS FOR ADDITIONAL INFORMATION AND DETAILS)
- S10 PROPOSED HEAVY DUTY ASPHALT PAVEMENT
- S11 PROPOSED ASPHALT PAVEMENT
- S12 PROPOSED INTEGRAL BLACK COLOR CONCRETE (SEE STRUCTURAL PLANS FOR ADDITIONAL INFORMATION AND DETAILS)
- S13 PROPOSED DETECTABLE WARNING PLATE
- S14 PROPOSED LANDSCAPE AREA (SEE LANDSCAPE PLANS FOR ADDITIONAL INFORMATION AND DETAILS)
- S16 PROPOSED PRECAST CONCRETE WHEEL STOP (TYP. OF 12)
- S17 PROPOSED HANDICAP ACCESSIBLE PARKING SIGN PER LOCAL CODE (TYP. OF 6)
- S18 PROPOSED 4" PAVEMENT STRIPING PER LOCAL CODE
- S19 PROPOSED HANDICAP ACCESSIBLE PARKING STALL STRIPING AND SYMBOL PER LOCAL CODE (TYP.)
- S20 EXISTING CONCRETE CURB AND GUTTER TO REMAIN
- S21 EXISTING CONCRETE SIDEWALK AND RAMPS TO REMAIN
- S22 EXISTING ASPHALT PAVEMENT TO REMAIN
- S23 PROPOSED 24" WIDE STOP BAR PAINTED WHITE
- S24 PROPOSED 30" R1-1 STOP SIGN
- S25 PROPOSED CONCRETE TRANSFORMER PAD WITH STEEL BOLLARD PROTECTION (CONTRACTOR SHALL COORDINATE CONCRETE TRANSFORMER PAD LOCATION, SIZE AND THICKNESS WITH ELECTRIC COMPANY PRIOR TO INSTALLATION)
- S26 PROPOSED HANDICAP RAMP PER LOCAL CODES
- S29 EXISTING CONCRETE PAVEMENT TO REMAIN
- S30 PROPOSED "GO PARKING" SIGNS (SEE ARCHITECTURAL PLANS FOR DETAIL)

SITE PLAN NOTES:

- REFER TO THE GEOTECHNICAL ENGINEERING REPORT PREPARED BY TERRACON CONSULTANTS, INC. AND DATED APRIL 30TH, 2015 FOR ADDITIONAL INFORMATION REGARDING THE EXISTING SOIL CONDITIONS AND SUBGRADE PREPARATION REQUIREMENTS AND PROPOSED PAVEMENT RECOMMENDATIONS (TERRACON PROJECT NO. 01155041).
- SEE CONSTRUCTION DETAILS SHEET C7.0 FOR PAVEMENT SECTION DETAILS.
- SEE GENERAL NOTES SHEET C1.0 FOR EXISTING LEGEND.

PROJECT INFORMATION:

SITE AREA: ±2.25 ACRES
ZONED: LIMITED COMMERCIAL AND COMMUNITY UNIT PLAN
PROPOSED BUILDING AREA: 8,906 SQ. FT., 5,617 SQ. FT. (SEATING AREA)
PROPOSED USE: RESTAURANT
BUILDING HEIGHT: 25'-6"
PARKING REQUIRED: 125 STALLS (1 STALL PER 45 SQ. FT. OF SEATING AREA)
PARKING PROVIDED: 189 STALLS (INCLUDING 6 ADA STALLS)



PAVEMENT HATCH LEGEND:

- PROPOSED CONCRETE SIDEWALK
5" PORTLAND CEMENT CONCRETE
4" KDOT AB-3 AGGREGATE BASE
- PROPOSED HEAVY DUTY CONCRETE
7" PORTLAND CEMENT CONCRETE WITH #5 BARS @12" O.C. EACH WAY
4" KDOT AB-3 AGGREGATE BASE (SEE STRUCTURAL PLANS FOR ADDITIONAL INFORMATION AND DETAIL)
- PROPOSED CONCRETE LANDING
6" PORTLAND CEMENT CONCRETE WITH 6X6 W2.9XW2.9 WWF
4" KDOT AB-3 AGGREGATE BASE (SEE STRUCTURAL PLANS FOR ADDITIONAL INFORMATION AND DETAILS)
- PROPOSED HEAVY DUTY ASPHALT PAVEMENT
2" L.O.W. TYPE SC-1 SURFACE COURSE
5" L.O.W. TYPE BC-1 BINDER COURSE
8" KDOT AB-3 AGGREGATE BASE
- PROPOSED ASPHALT PAVEMENT
2" L.O.W. TYPE SC-1 SURFACE COURSE
3-1/2" L.O.W. TYPE BC-1 BINDER COURSE
8" KDOT AB-3 AGGREGATE BASE
- PROPOSED INTEGRAL BLACK COLORED CONCRETE
6" PORTLAND CEMENT CONCRETE WITH 6X6 W2.9XW2.9 WWF
6" KDOT AB-3 AGGREGATE BASE (SEE STRUCTURAL PLANS FOR ADDITIONAL INFORMATION AND DETAIL)
- PROPOSED DETECTABLE WARNING PLATE
- PROPOSED LANDSCAPE AREA (SEE LANDSCAPE PLANS FOR ADDITIONAL INFORMATION AND DETAILS)

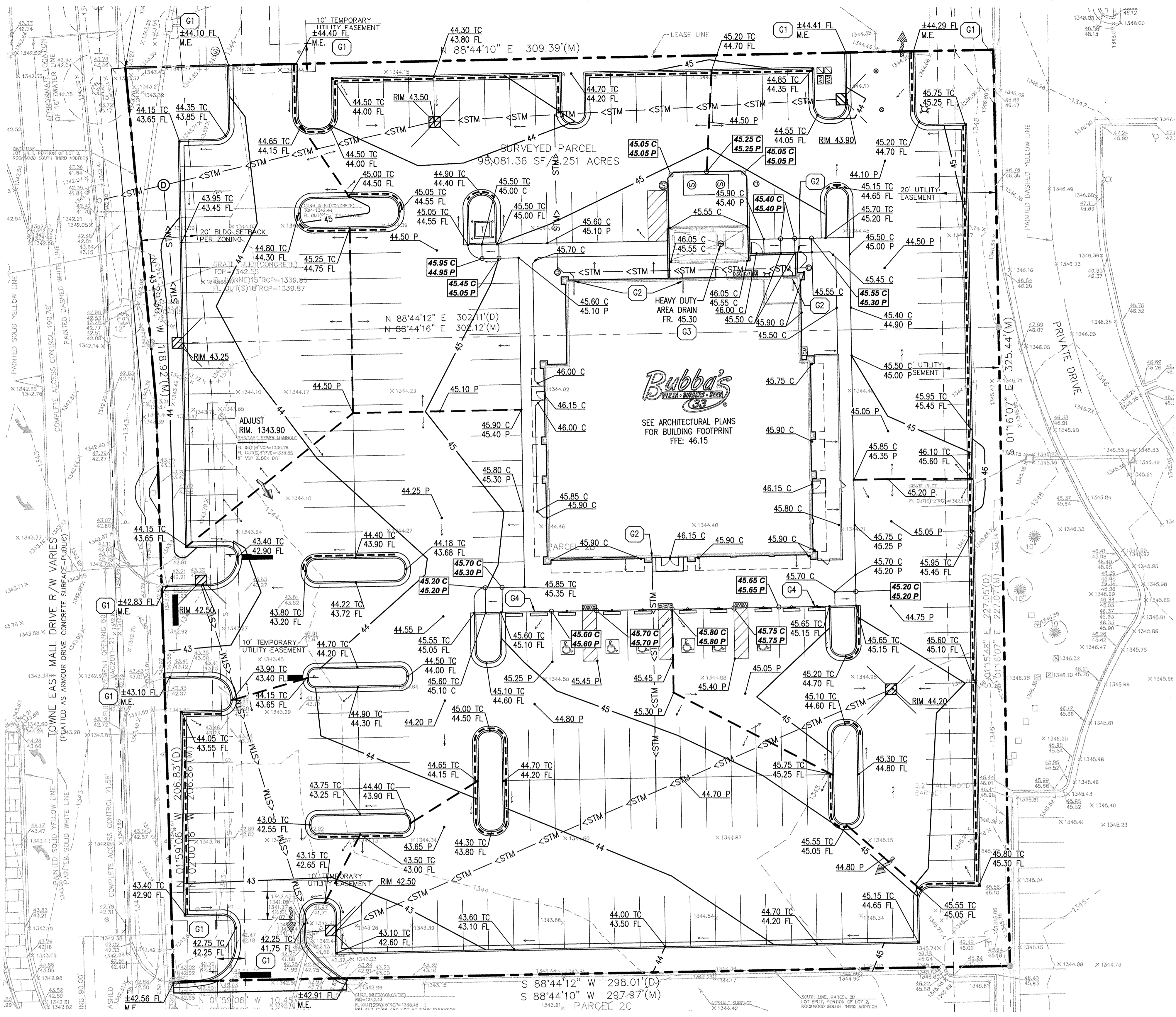
PROPOSED LEGEND:

- PROPERTY LINE
- PROPOSED CONCRETE CURB AND GUTTER
- PROPOSED DEPRESSED CONCRETE CURB AND GUTTER
- PROPOSED REVERSE PITCH CONCRETE CURB AND GUTTER
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
- FFE: FINISHED FLOOR ELEVATION
TC: TOP OF CURB ELEVATION
FL: CURB FLOWLINE ELEVATION
C: TOP OF CONCRETE ELEVATION
P: TOP OF PAVEMENT ELEVATION
FG: FINISHED GRADE ELEVATION
ME: MATCH EXISTING ELEVATION
- PROPOSED SPOT ELEVATION
EXPOSED CURB FACE VARIES
- PROPOSED GRADING RIDGE LINE
- PROPOSED DRAINAGE FLOW DIRECTION
- PROPOSED OVERLAND FLOOD ROUTE
- PROPOSED STORM SEWER STRUCTURE WITH OPEN GRATE
- PROPOSED STORM SEWER STRUCTURE WITH CLOSED LID
- PROPOSED STORM SEWER CLEAN OUT
- PROPOSED HEAVY DUTY AREA DRAIN
- PROPOSED STORM SEWER
- PROPOSED SANITARY SEWER STRUCTURES
- PROPOSED SANITARY SEWER GREASE INTERCEPTOR
- PROPOSED WATER STRUCTURES
- PROPOSED FIRE HYDRANT
- PROPOSED FIRE DEPARTMENT CONNECTION (FDC)

GENERAL GRADING NOTES:

1. ALL GRADING AND SITE PREPARATION WORK SHALL CONFORM WITH THE RECOMMENDATIONS AND SPECIFICATIONS CONTAINED IN THE GEOTECHNICAL REPORT.
2. CONTRACTOR SHALL CAREFULLY PRESERVE ALL SITE BENCHMARKS AND REFERENCE POINTS DURING CONSTRUCTION OPERATIONS.
3. CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST FORTY-EIGHT (48) HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED SITE IMPROVEMENTS SHOWN ON THE PLANS.
4. CONTRACTOR SHALL INSTALL APPROPRIATE TREE PROTECTION MEASURES PRIOR TO COMMENCEMENT OF SITE GRADING OPERATIONS.
5. ALL PROPOSED GRADING, PAVEMENT, APRONS, CURBS, WALKS, ETC. SHALL MATCH EXISTING GRADES FLUSH.
6. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE TO ALL STORM DRAINAGE STRUCTURES. AREAS OF SURFACE PONDING SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.
7. ALL EXISTING AND PROPOSED TOP OF FRAME ELEVATIONS FOR STORM, SANITARY, WATER AND OTHER UTILITY STRUCTURES SHALL BE ADJUSTED TO MEET FINISHED GRADE WITHIN THE PROJECT LIMITS.
8. CONTRACTOR SHALL UTILIZE CARE WHEN WORKING NEAR EXISTING UTILITIES TO REMAIN. ANY DAMAGE TO EXISTING UTILITIES NOT NOTED TO BE REMOVED SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE AND TO THE SATISFACTION OF THE OWNER AND/OR ENGINEER.
9. CONTRACTOR SHALL REPAIR AT HIS EXPENSE ANY DAMAGE TO EXISTING ASPHALT, CONCRETE, CURBS, SIDEWALKS, ETC. RESULTING

10. FROM CONSTRUCTION TRAFFIC AND/OR OPERATIONS. REPAIRS SHALL BE MADE TO THE SATISFACTION OF THE OWNER AND/OR ENGINEER. CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS OUTSIDE OF CONSTRUCTION LIMITS TO ORIGINAL CONDITION OR BETTER.
11. MAXIMUM CROSS SLOPES AND LONGITUDINAL SLOPES FOR ALL CONCRETE SIDEWALKS AND HANDICAP ACCESSIBLE ROUTES SHALL NOT EXCEED 2% AND 5%, RESPECTIVELY.
12. MAXIMUM SLOPES WITHIN THE HANDICAP ACCESSIBLE PARKING AREAS SHALL NOT EXCEED 2% IN ANY DIRECTION.
13. MAXIMUM GRADE DIFFERENCE BETWEEN PAVEMENT SURFACES AND ADJACENT CONCRETE SIDEWALKS FOR THE ACCESSIBLE ROUTE TO THE BUILDING SHALL NOT EXCEED 1/4" VERTICAL OR 1/2" WHEN BEVELED.
14. ALL HANDICAP ACCESSIBLE EXTERIOR DOORWAY LOCATIONS REQUIRE AN EXTERIOR LANDING THAT IS A MINIMUM OF FIVE (5) FEET IN LENGTH WITH A SLOPE NOT EXCEEDING 2% IN ANY DIRECTION.
15. EXCAVATION SHORING SHALL BE DONE AS NECESSARY FOR THE PROTECTION OF THE WORK AND FOR THE SAFETY OF PERSONNEL. SHORING SHALL BE IN ACCORDANCE WITH ALL O.S.H.A AND LOCAL REGULATIONS.
16. ALL STRUCTURE BENCH WALLS SHALL BE SHAPED AND FORMED FOR A CLEAN TRANSITION WITH PROPER HYDRAULICS TO ALLOW THE SMOOTH CONVEYANCE OF FLOWS THROUGH THE MANHOLE OR BOX INLET. THE BENCH WALL SHALL FORM A DEFINED CHANNEL, TO A MINIMUM HEIGHT OF 80-PERCENT OF THE INSIDE DIAMETER OF THE INLET AND OUTLET PIPES TO FORM A "U" SHAPED CHANNEL, CONSTRUCTED AT A MINIMUM 1/2-INCH PER FOOT SLOPE TO THE MANHOLE WALL.
17. ALL STORM WATER INLETS AND CATCH BASIN CASTINGS SHALL HAVE THE WORDS "NO DUMPING, DRAINS TO STREAM", OR SIMILARLY APPROVED MESSAGE, CAST IN RAISED OR RECESSED LETTERS AT A MINIMUM OF 1" IN HEIGHT. IN ADDITION, A SYMBOL OF A FISH SHALL ALSO BE CAST WITH THE LETTERS.
18. SEE GENERAL NOTES SHEET FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



GRADING & DRAINAGE KEY NOTES: (G#)

- G1 FIELD VERIFY AND MATCH EXISTING ELEVATION AT PROJECT SCOPE OF WORK LIMITS (TYP.)
- G2 PROPOSED ROOF DRAIN LOCATION (SEE UTILITY PLAN FOR MORE INFORMATION)
- G3 PROPOSED ZURN Z505 AREA DRAIN (SEE UTILITY AND PLUMBING PLANS)
- G4 CURB TRANSITION FOR 0" TO 6" IN HEIGHT

PROJECT BENCHMARKS:

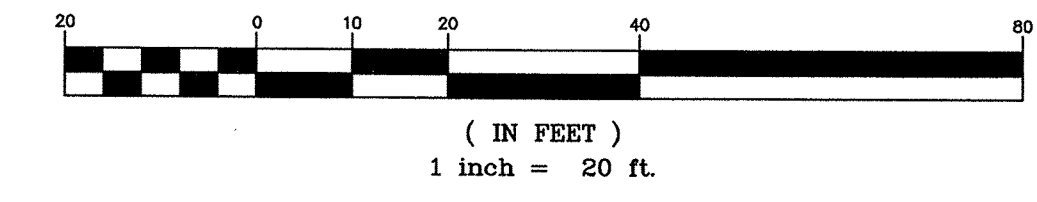
- SITE BENCHMARKS:**
- BM #1: CHISELED "SQUARE" ON SOUTHWEST CORNER OF CURB INLET, 50± EAST OF SOUTHWEST CORNER OF PARCEL 2B. ELEVATION=1342.47
 - BM #2: CHISELED "SQUARE" ON TOP CURB AT WEST SIDE CURB ISLAND WITHOUT LIGHT POLE, 200± SOUTH SOUTHWEST OF NORTHEAST CORNER OF LOT ELEVATION=1348.87
 - BM #3: CHISELED "SQUARE" ON TOP CURB AT POINT OF INTERSECTION FOR OLD CHICAGO NORTHWEST PARKING LOT, 62± NORTH OF THE SOUTHWEST CORNER OF PARCEL 2B. ELEVATION=1346.46

FLOOD NOTE:

PROJECT SITE DOES NOT LIES WITHIN A 100 YEAR FLOOD HAZARD AREA AND IS LOCATED IN ZONE "X" AS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP NUMBER 20173C0386E, LAST REVISED FEBRUARY 2, 2007.



GRAPHIC SCALE

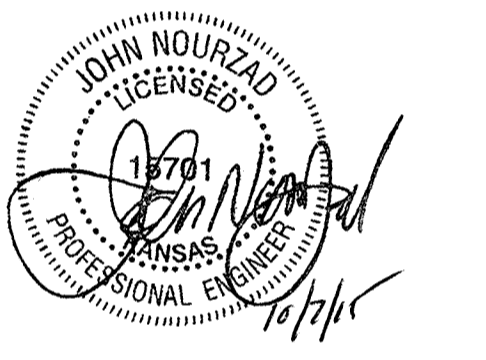


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09/25/15	CONSTRUCTION SET

PROFESSIONAL SEAL



PROFESSIONAL IN CHARGE
JOHN NOURZAD
PROFESSIONAL ENGINEER
LICENSE NO. 15701

PROJECT MANAGER
BRIAN OLESEN

QUALITY CONTROL
LARRY DIEHL

DRAWN BY
PETIA STOYANOVA-POUHALEVA

PROJECT NAME

BUBBA'S 33

WICHITA KANSAS

412 S. TOWNE EAST DRIVE

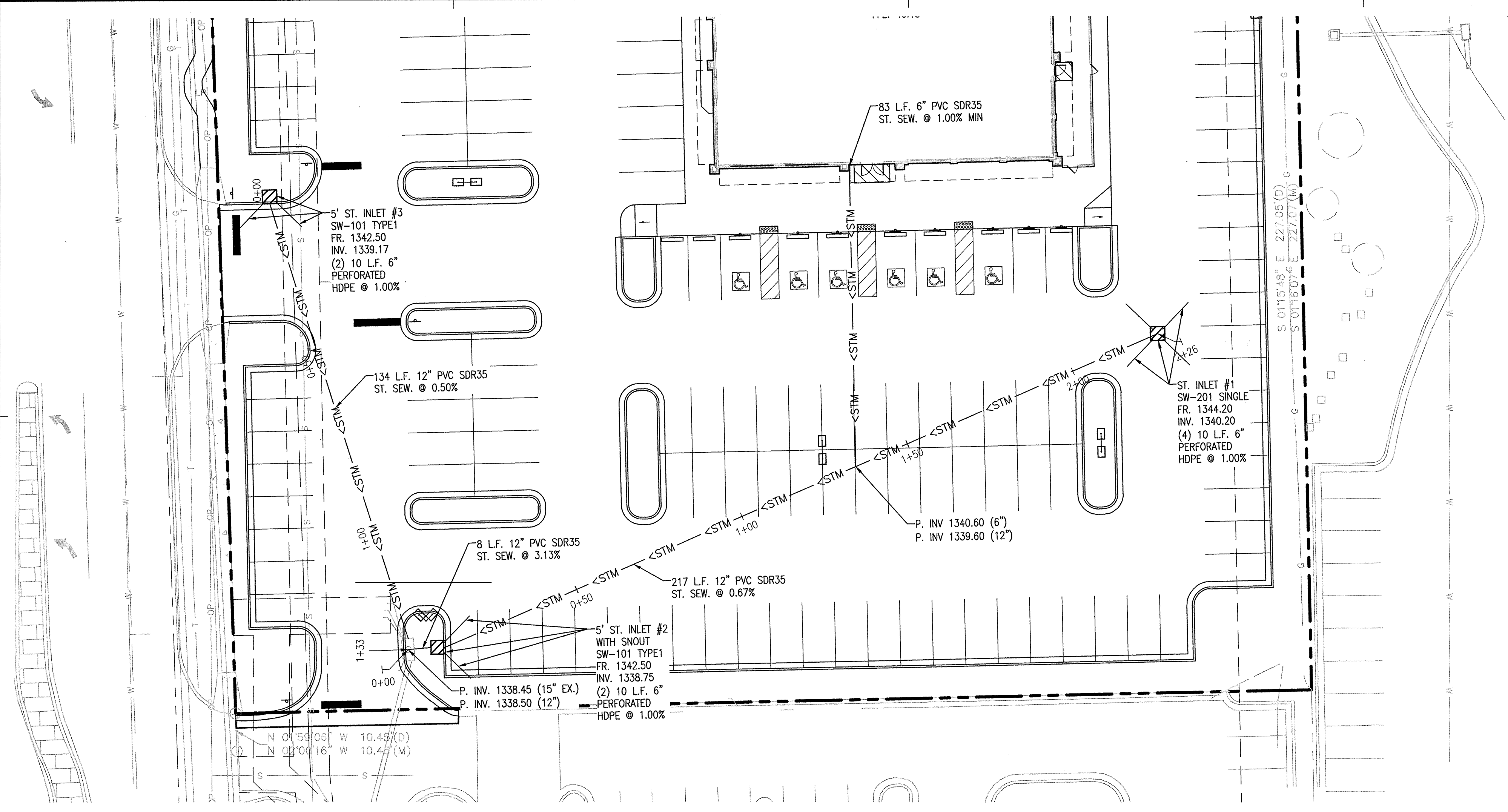


PROJECT NUMBER
201405680.0


SHEET TITLE
GRADING AND DRAINAGE PLAN

SHEET NUMBER
C4.0

Drawing Name: P:\2014\201405680_000_000_C401_Grading_Drainage\201405680_Grading_Drainage.dwg, Job: 2014 - 2014, Date: 09/25/15, 1:45pm by: jph



AS BUILTS

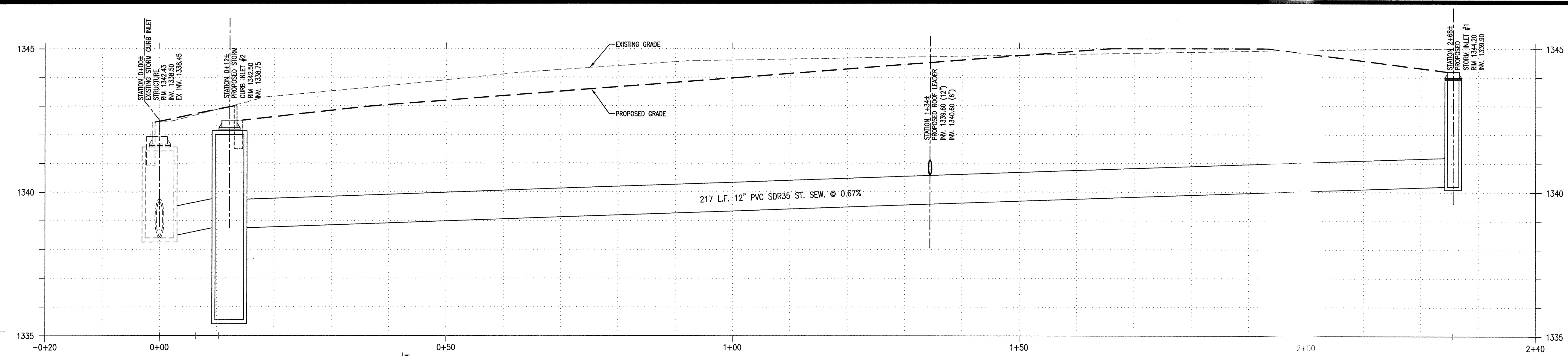


KEMILLER
ENGINEERING PA

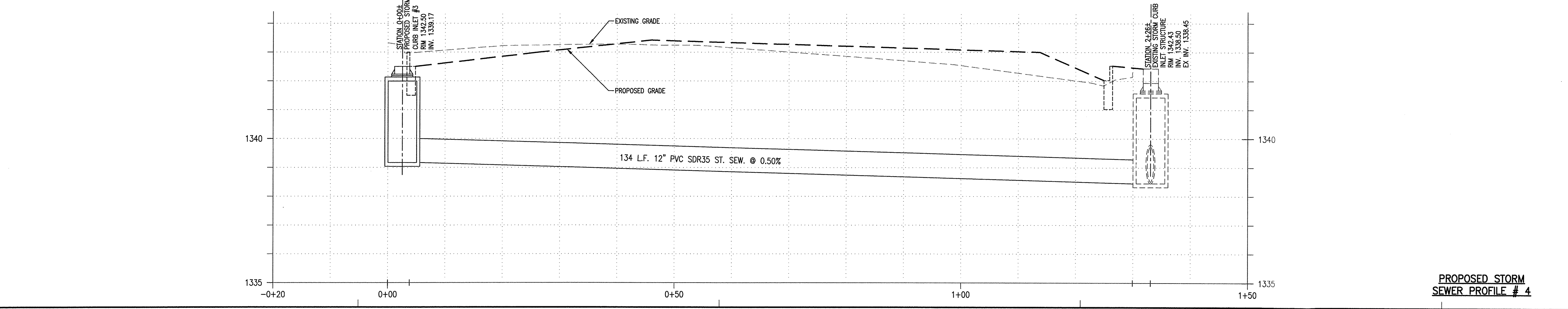
117 E. Lewis,
Wichita, KS 67202

(316)264-0242

PLAN VIEW
1" = 20'



PROPOSED STORM SEWER PROFILE # 3



PROPOSED STORM SEWER PROFILE # 4

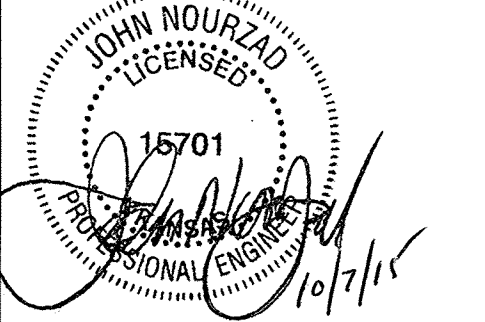
PROFILE VIEW
H: 1" = 10'
V: 1" = 2'

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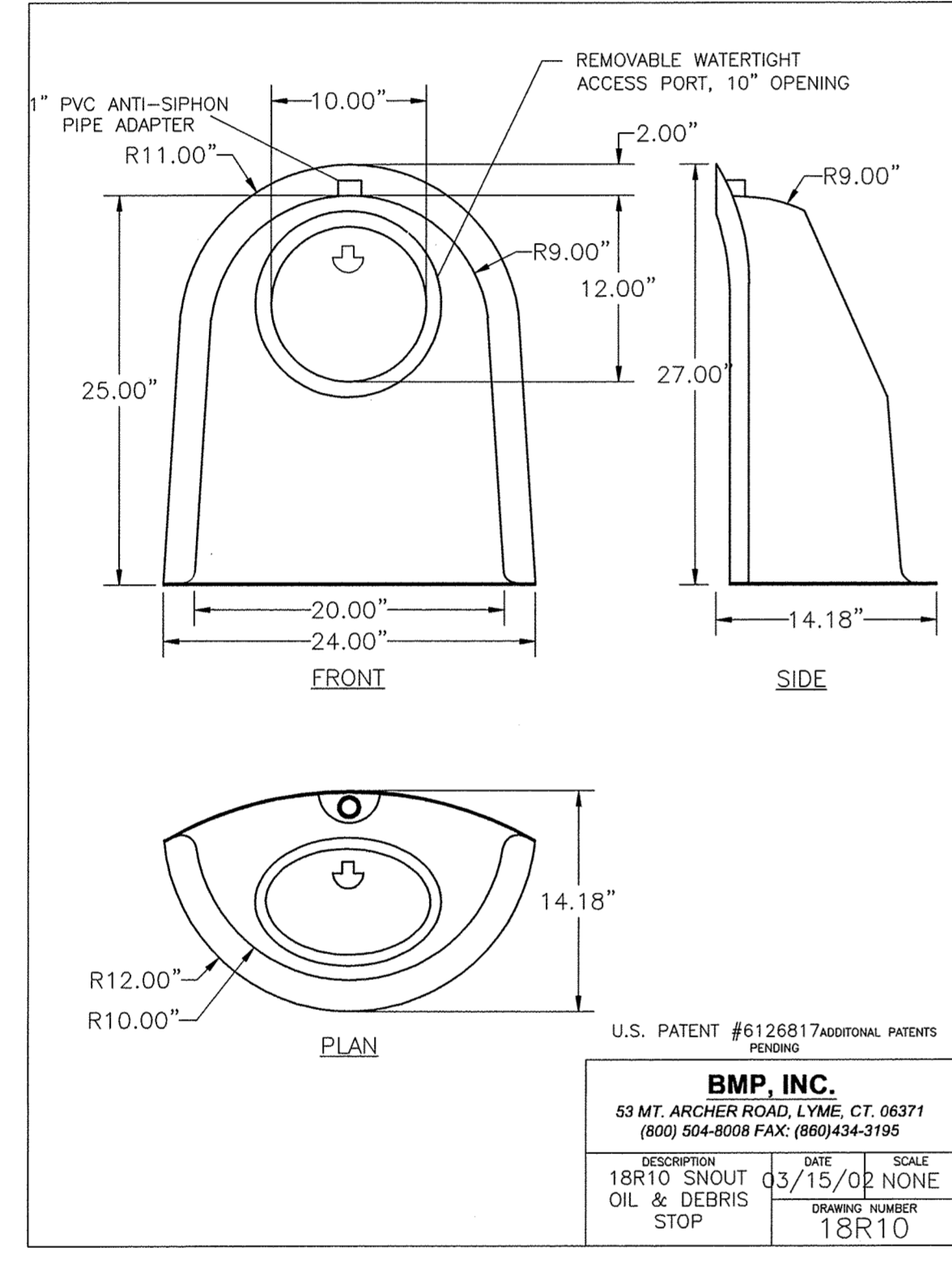


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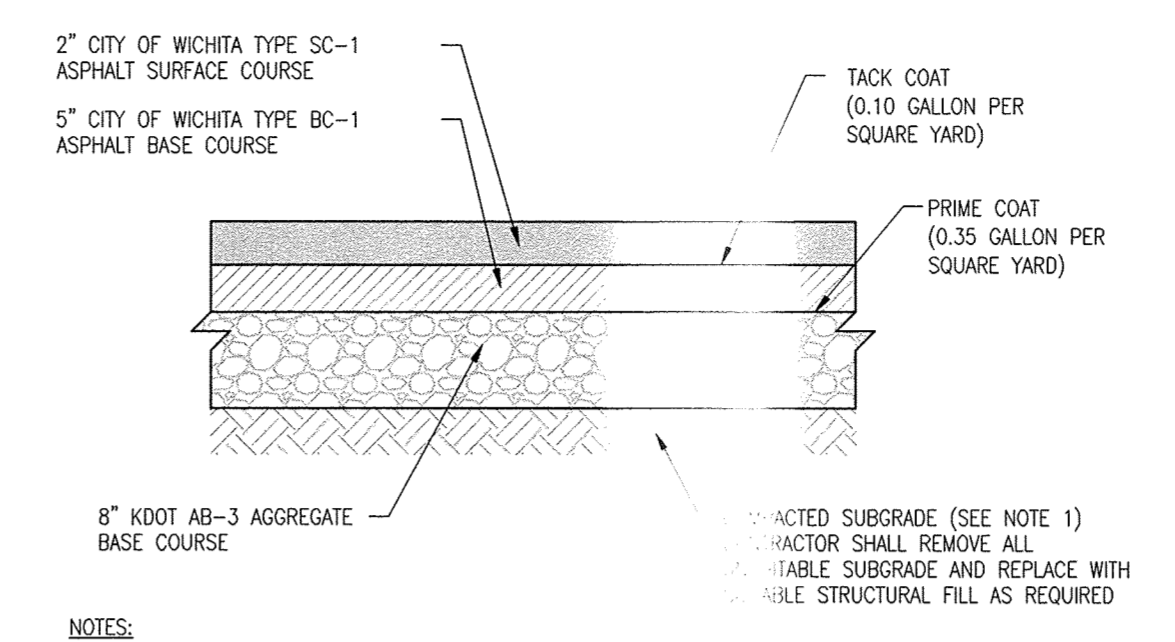
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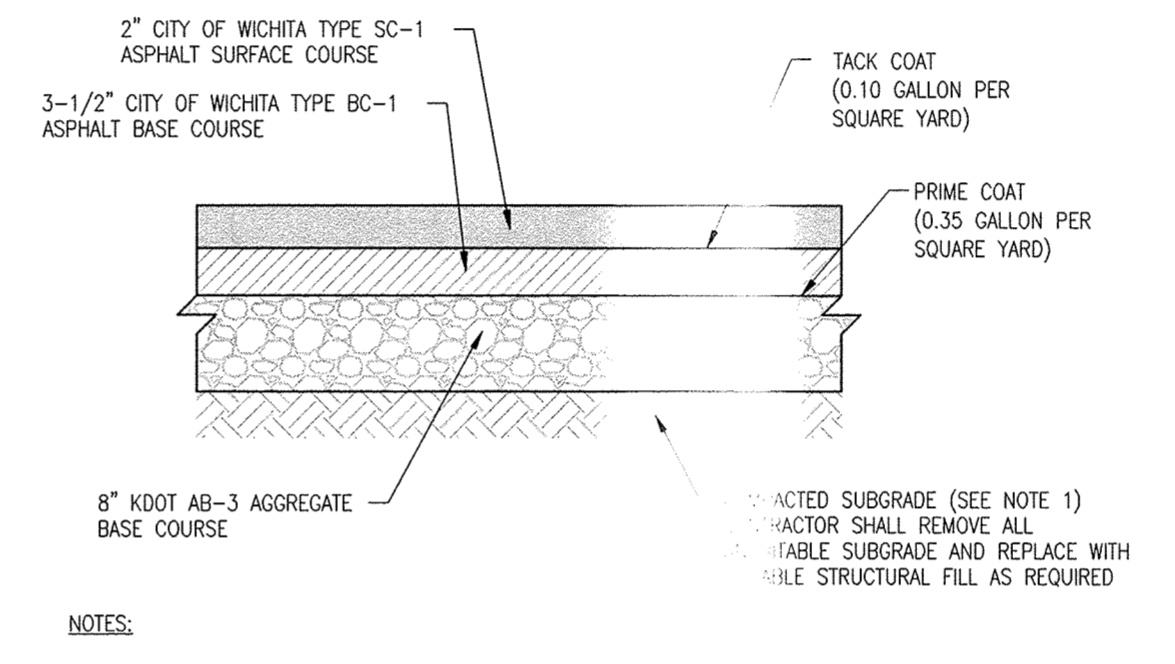


BMP, INC.
 53 MT. ARCHER ROAD, LYME, CT. 06371
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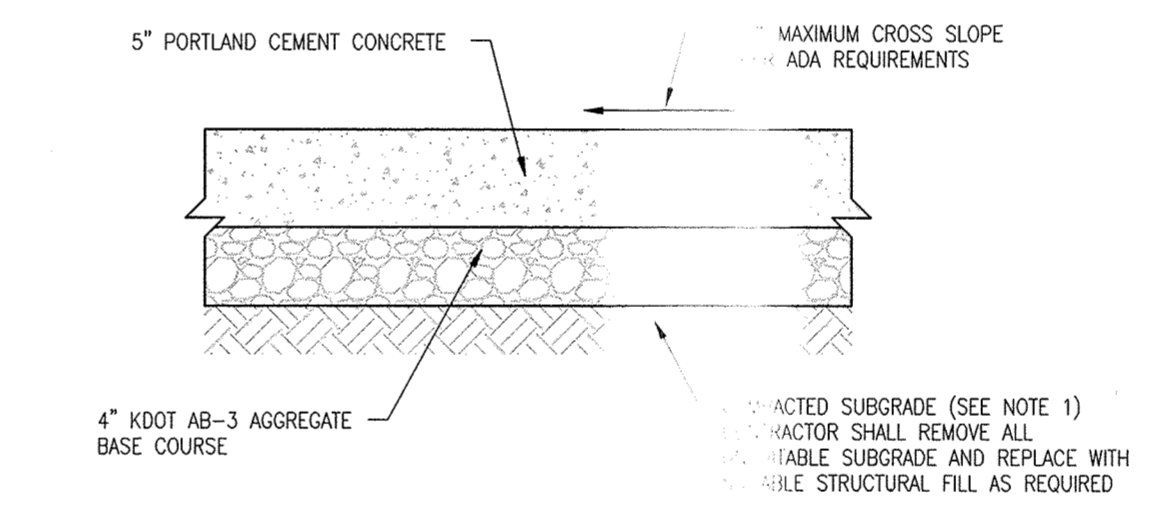
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DRAWING NUMBER		
18R10		



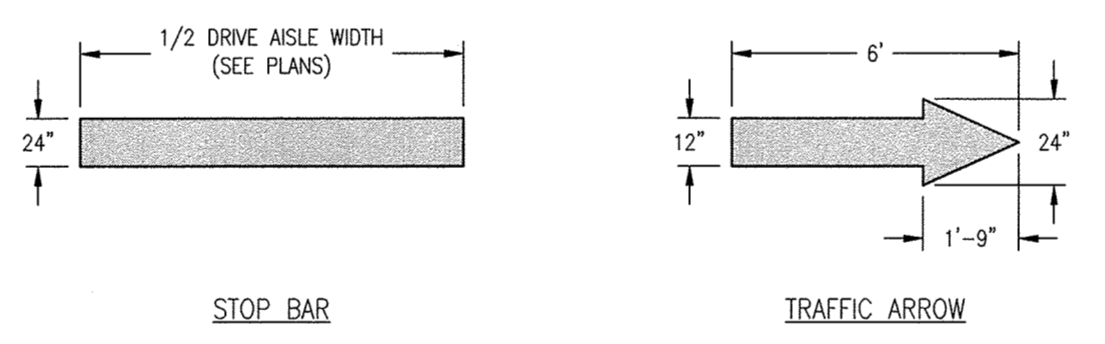
HEAVY DUTY ASPHALT PAVEMENT DETAIL
 NOT TO SCALE



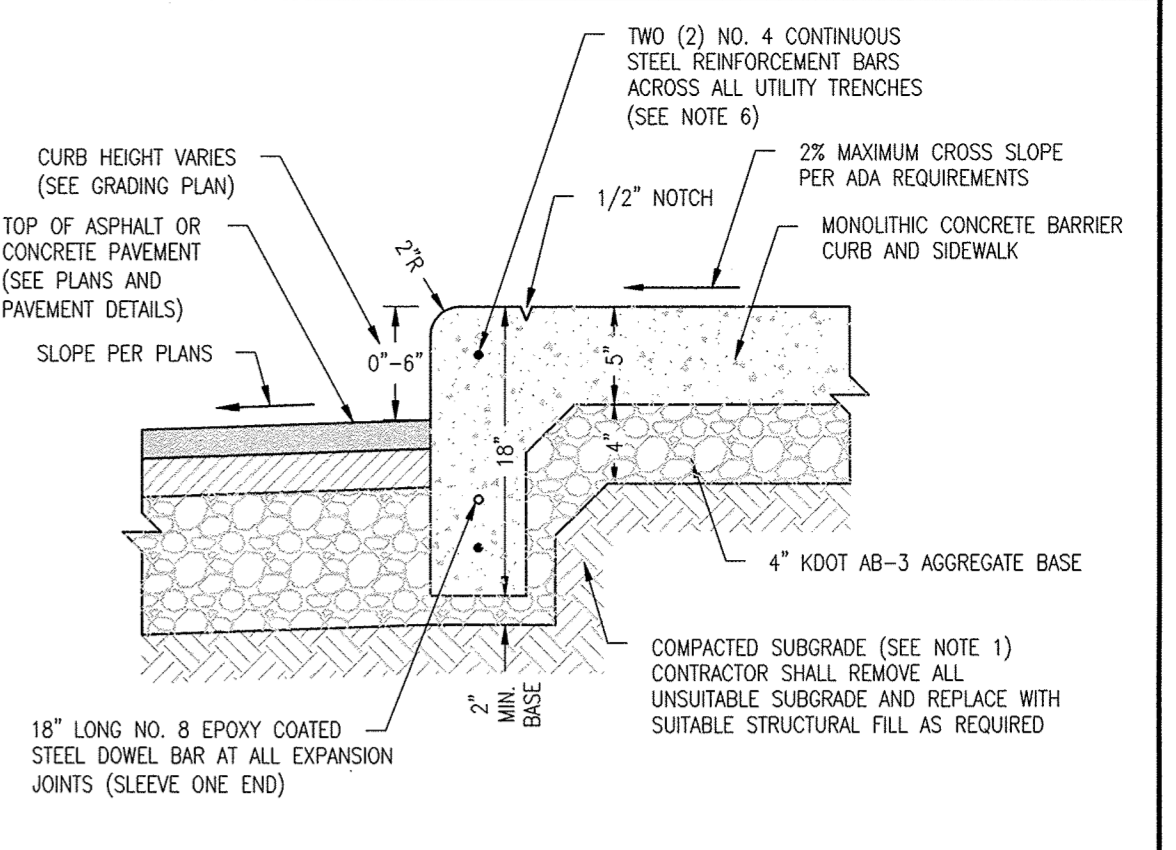
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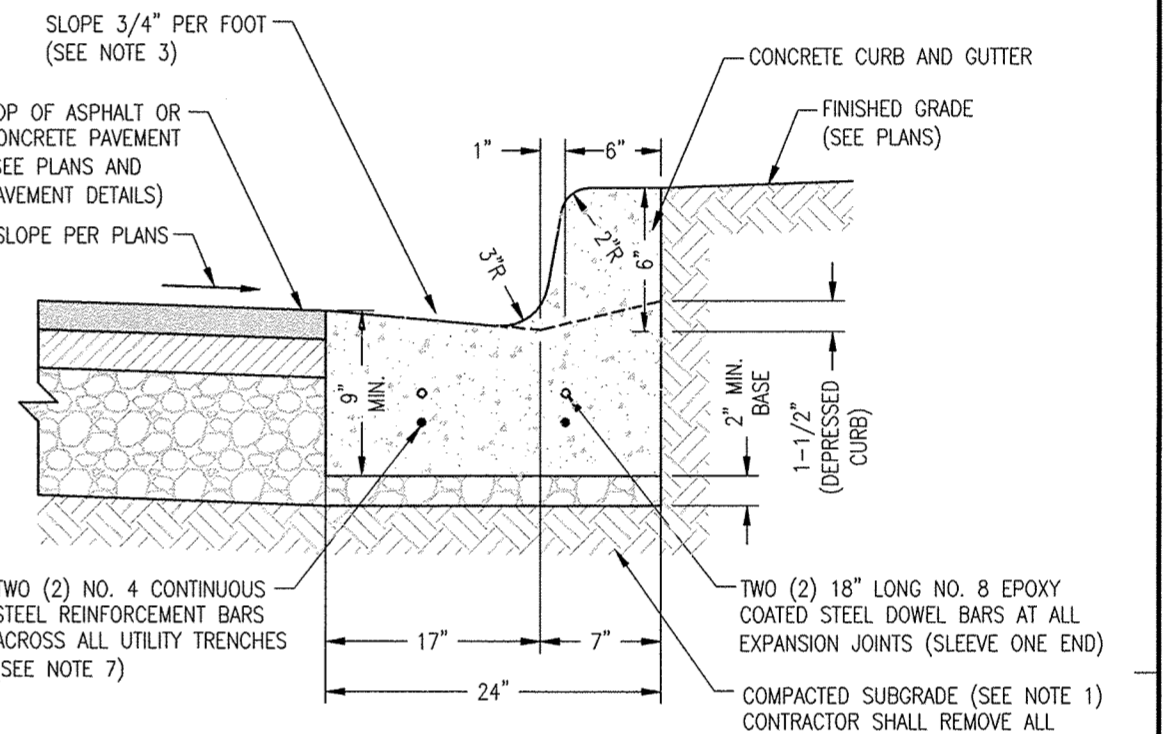
CONCRETE SIDEWALK DETAIL
 NOT TO SCALE



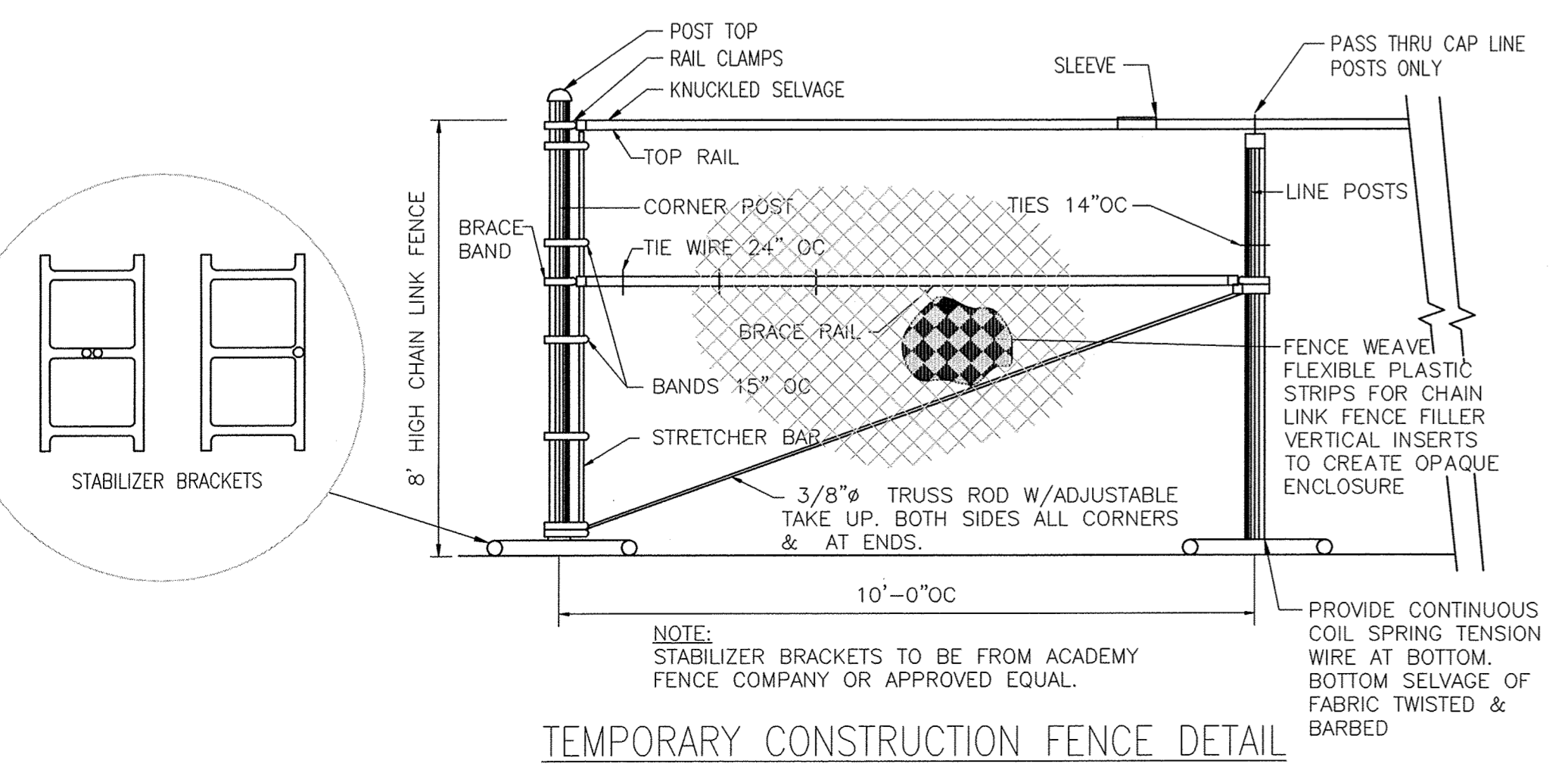
STOP BAR AND TRAFFIC ARROW DETAILS
 NOT TO SCALE



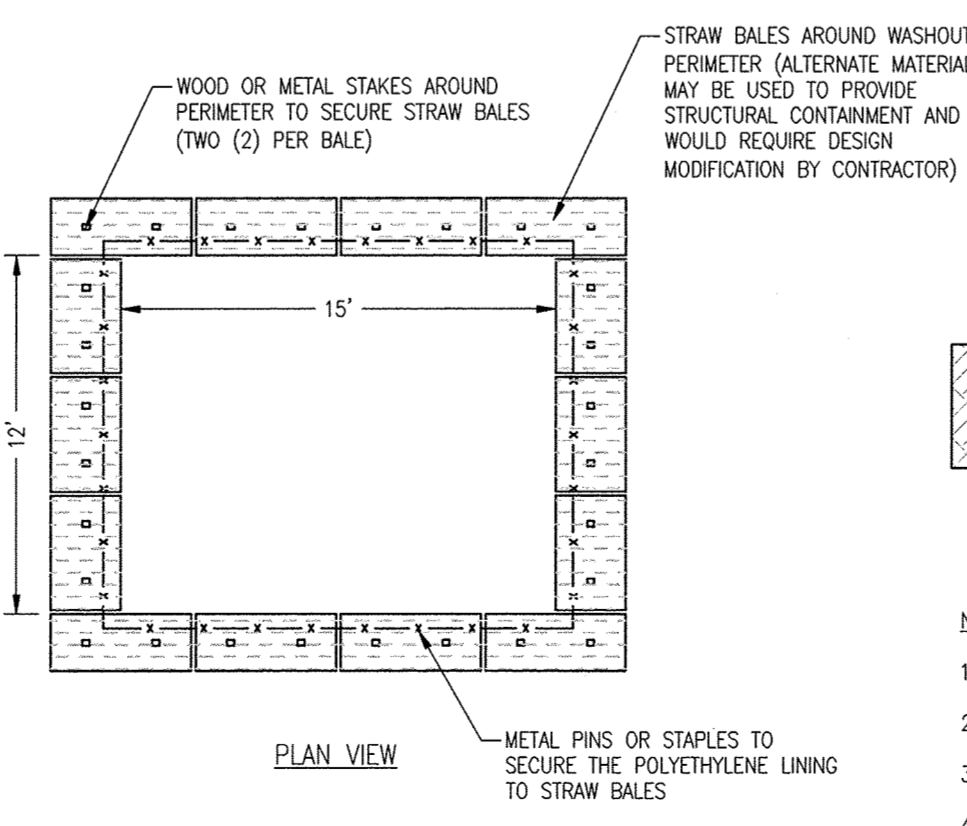
MONOLITHIC CONCRETE CURB AND SIDEWALK DETAIL
 NOT TO SCALE



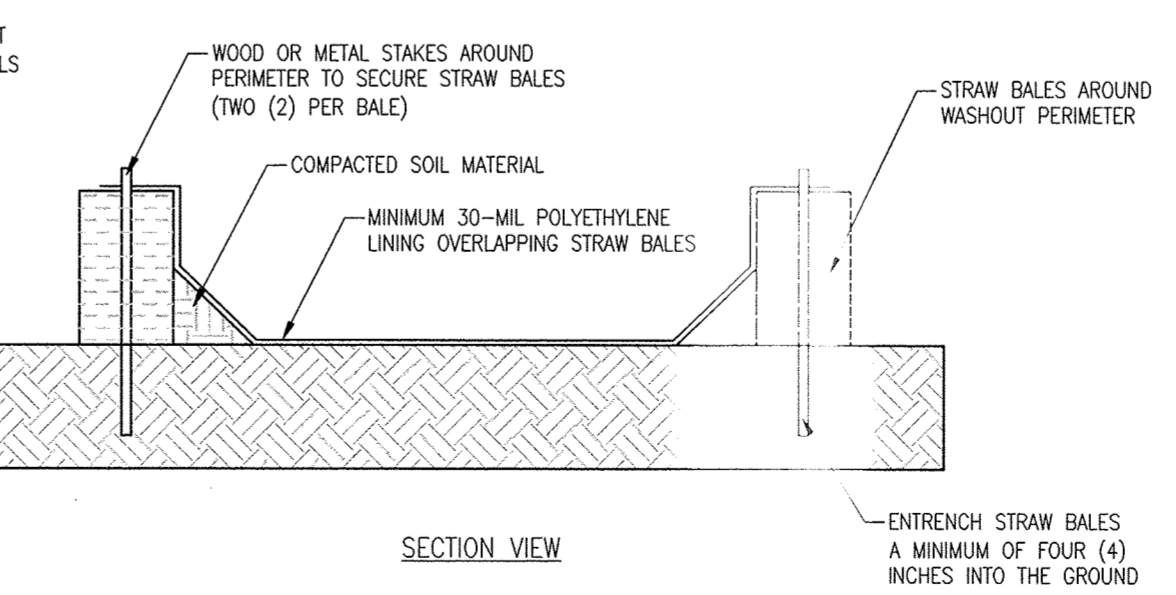
CONCRETE CURB AND GUTTER DETAIL
 NOT TO SCALE



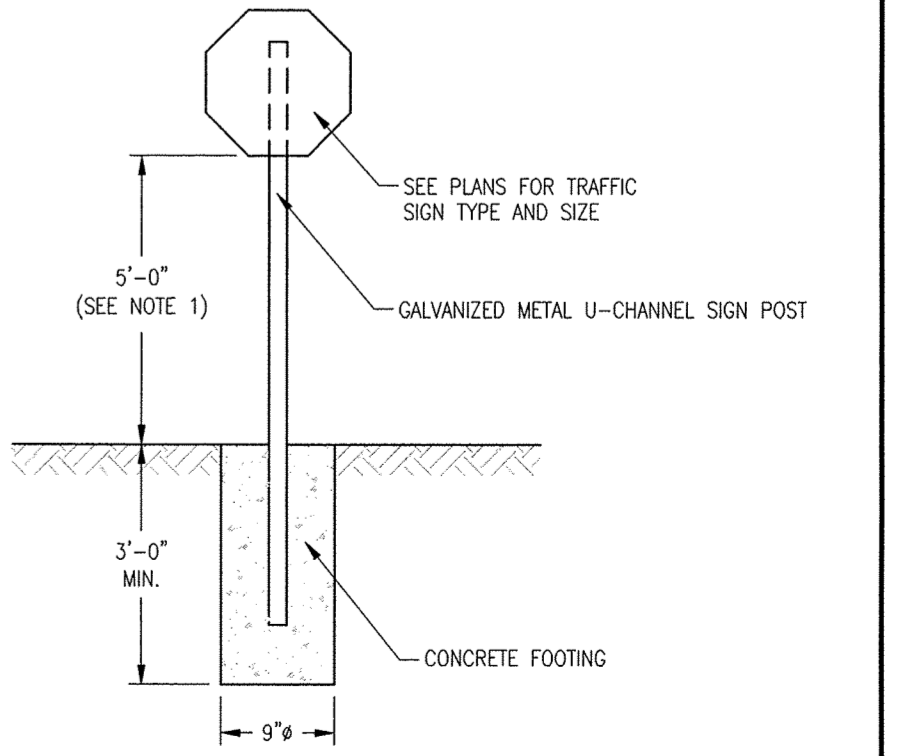
TEMPORARY CONSTRUCTION FENCE DETAIL
 SCALE: NONE



CONCRETE WASHOUT DETAIL
 NOT TO SCALE



- NOTES:**
- CONTRACTOR MAY PROVIDE PREFABRICATED CONCRETE WASHOUT BIN WITH MINIMUM 30-MIL POLYETHYLENE LINER IN LIEU OF DETAIL SHOWN.
 - STOP WASHING OUT CONCRETE IF WATER IS OBSERVED RUNNING OFF THE WASHOUT AREA OR IF THE CONTAINMENT SYSTEM IS LEAKING OR OVERFLOWING AND INEFFECTIVE.
 - INSPECT DAILY AND AFTER EACH STORM EVENT. INSPECT THE INTEGRITY OF THE WALL STRUCTURE INCLUDING, WHERE APPLICABLE, THE CONTAINMENT SYSTEM.
 - THE CONCRETE WASHOUT SYSTEM SHOULD BE REPAIRED OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR ALL CONCRETE WASTE.

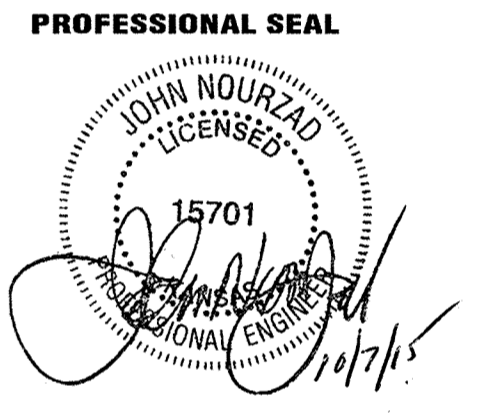


TRAFFIC SIGN DETAIL - GRASS AREA
 NOT TO SCALE

- NOTES:**
- TRAFFIC SIGN POSTS SHALL BE LOCATED 2' FROM BACK OF CURB AND SIGNS SHALL BE INSTALLED WITH A MINIMUM HEIGHT OF FIVE (5) FEET ABOVE FINISHED PAVEMENT OR GRADE ELEVATION UNLESS OTHERWISE DIRECTED BY LOCAL BUILDING CODES.
 - TRAFFIC SIGNS SHALL BE IN FURNISHED IN ACCORDANCE WITH THE LATEST U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."

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PROFESSIONAL IN CHARGE
JOHN NOURZAD
 PROFESSIONAL ENGINEER
 LICENSE NO. 15701

PROJECT MANAGER
 BRIAN OLESEN

QUALITY CONTROL
 LARRY DIEHL

DRAWN BY
 PETIA STOYANOVA-POUHALEVA

PROJECT NAME
BUBBA'S 33

WICHITA KANSAS
 412 S. TOWNE EAST DRIVE



PROJECT NUMBER
 201405680.0

SHEET TITLE
CONSTRUCTION DETAILS

SHEET NUMBER
C7.0

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PROFESSIONAL SEAL

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LICENSE NO. 15701

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BRIAN OLESEN

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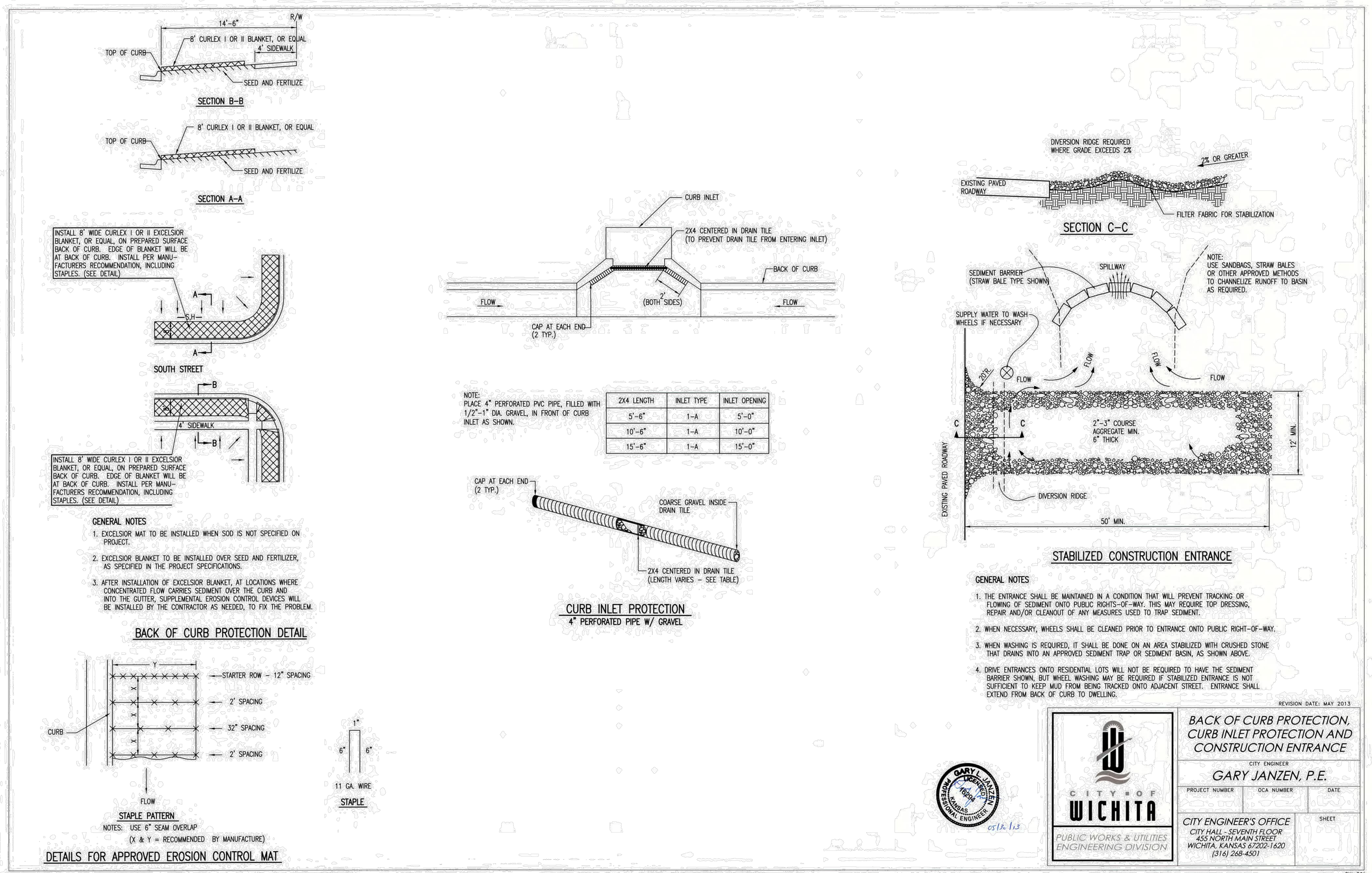
WICHITA KANSAS
412 S. TOWNE EAST DRIVE



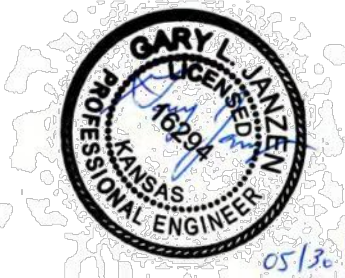
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201405680.0

SHEET TITLE
EROSION CONTROL DETAILS

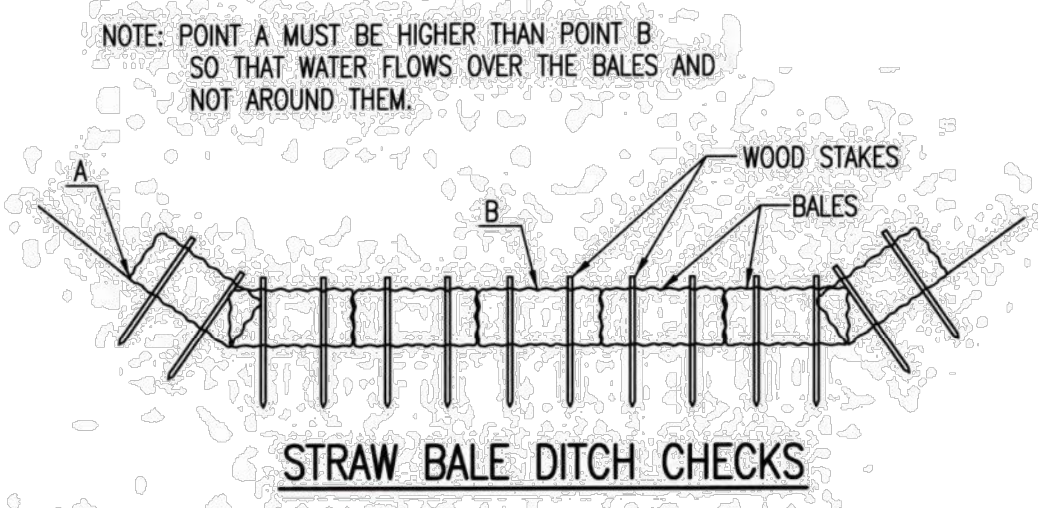
SHEET NUMBER
C7.2



Drawn: 11/15/15 (150500000) GJK, Checked: 11/15/15 (150500000) JKL, Date: 11/15/15, 15:00 by JKL



SW-501



MATERIAL SPECIFICATION:
BALE DITCH CHECKS MAY BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE. THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4" LONG.
OPTIONAL: THE DOWNSTREAM SCOUR APRON SHOULD BE CONSTRUCTED OF A DOUBLE-NETTED STRAW EROSION-CONTROL BLANKET AT LEAST 6' WIDE.
OPTIONAL: THE METAL LANDSCAPE STAPLES USED TO ANCHOR THE EROSION-CONTROL BLANKET SHOULD BE AT LEAST 8" LONG.

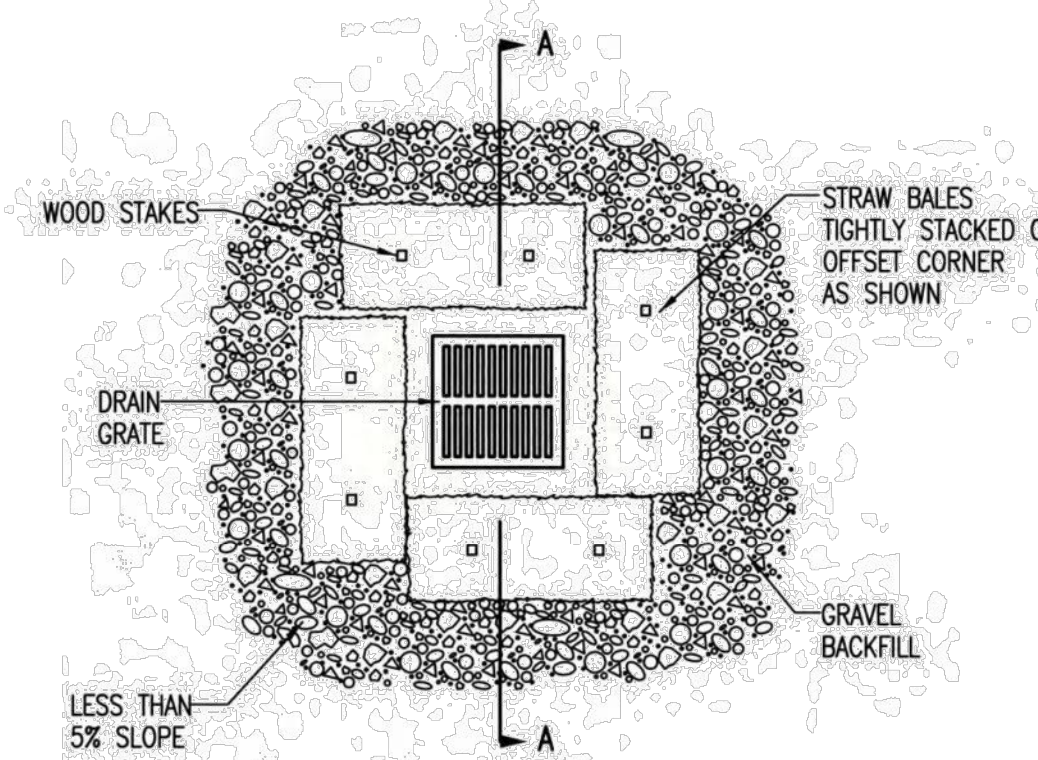
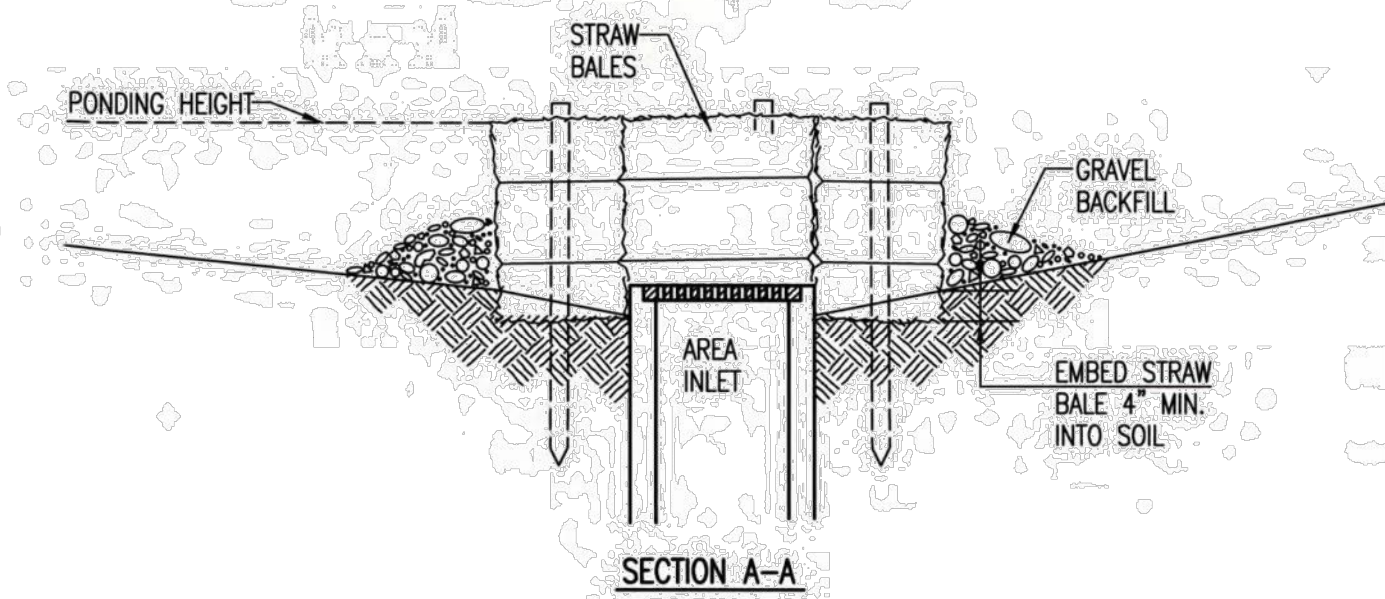
PLACEMENT:
BALE DITCH CHECKS SHOULD BE PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH. THE DITCH CHECK SHOULD EXTEND FAR ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE CHECK IS HIGHER THAN THE TOP OF THE LOWEST CENTER BALE. THIS PREVENTS WATER FROM FLOWING AROUND THE CHECK.
STRAW BALE DITCH CHECKS SHOULD NOT BE PLACED IN DITCHES WHERE HIGH FLOWS ARE EXPECTED. ROCK CHECKS SHOULD BE USED INSTEAD.
BALES SHOULD BE PLACED IN DITCHES WITH SLOPES OF 6% OR LESS. FOR SLOPES STEEPER THAN 6%, ROCK CHECKS SHOULD BE USED.
THE FOLLOWING TABLE PROVIDES CHECK SPACING FOR A GIVEN DITCH GRADE:

DITCH CHECK SPACING (%)	CHECK SPACING (FEET)
0.5	200
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	30

PROPER INSTALLATION METHOD:
EXCAVATE A TRENCH PERPENDICULAR TO THE DITCH FLOWLINE THAT IS 4" DEEP AND A BALE'S WIDTH WIDE. EXTEND THE TRENCH IN A STRAIGHT LINE ALONG THE ENTIRE LENGTH OF THE PROPOSED DITCH CHECK. PLACE THE SOIL ON THE UPSTREAM SIDE OF THE TRENCH—IT WILL BE USED LATER.
OPTIONAL: ON THE DOWNSTREAM SIDE OF THE TRENCH, ROLL OUT A LENGTH OF EROSION-CONTROL BLANKET (SCOUR APRON) EQUAL TO THE LENGTH OF THE TRENCH. PLACE THE UPSTREAM EDGE OF THE EROSION-CONTROL BLANKET ALONG THE BOTTOM UPSTREAM EDGE OF THE TRENCH. THE EROSION CONTROL BLANKET SHOULD BE ANCHORED IN THE TRENCH WITH ONE ROW OF 8" LANDSCAPE STAPLES PLACED ON 18" CENTERS. THE REMAINDER OF THE EROSION-CONTROL BLANKET (THE PORTION THAT IS NOT LYING IN THE TRENCH) WILL SERVE AS THE DOWNSTREAM SCOUR APRON. THIS SECTION OF THE BLANKET SHOULD BE ANCHORED TO THE GROUND WITH 8" LANDSCAPE STAPLES PLACED AROUND THE PERIMETER OF THE BLANKET ON 18" CENTERS. THE REMAINDER OF THE BLANKET SHOULD BE ANCHORED USING TWO EVENLY SPACED ROWS OF 8" LANDSCAPE STAPLES ON 18" CENTERS PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH.
PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE ALONG THE CENTERLINE OF THE DITCH CHECK, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS. STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND.
ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE UPSTREAM SIDE OF THE CHECK AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP AND EXTEND UPSTREAM NO MORE THAN 24".

LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:
DO NOT PLACE A BALE DITCH CHECK DIRECTLY IN FRONT OF A CULVERT OUTLET. IT WILL NOT STAND UP TO THE CONCENTRATED FLOW.
DO NOT PLACE BALE DITCH CHECKS IN DITCHES THAT WILL LIKELY EXPERIENCE HIGH FLOWS. THEY WILL NOT STAND UP TO CONCENTRATED FLOW.
FOLLOW PRESCRIBED DITCH-CHECK SPACING GUIDELINES. IF SPACING GUIDELINES ARE EXCEEDED, EROSION WILL OCCUR BETWEEN THE DITCH CHECKS.
DO NOT ALLOW WATER TO FLOW AROUND THE DITCH CHECK. MAKE SURE THAT THE DITCH CHECK IS LONG ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE CHECK IS HIGHER THAN THE TOP OF THE LOWEST CENTER BALE.
DO NOT PLACE BALE DITCH CHECKS IN CHANNELS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE CHECK IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT.
BALE DITCH CHECKS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE CHECK.

INSPECTION AND MAINTENANCE:
BALE DITCH CHECKS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:
DOES WATER FLOW AROUND THE DITCH CHECK?
DOES WATER FLOW UNDER THE DITCH CHECK?
DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
ARE ANY BALES AND/OR SCOUR APRONS (OPTIONAL) DISLODGED?
ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE DITCH CHECK?



STRAW BALE BARRIERS FOR AREA INLETS (INLET PROTECTION)

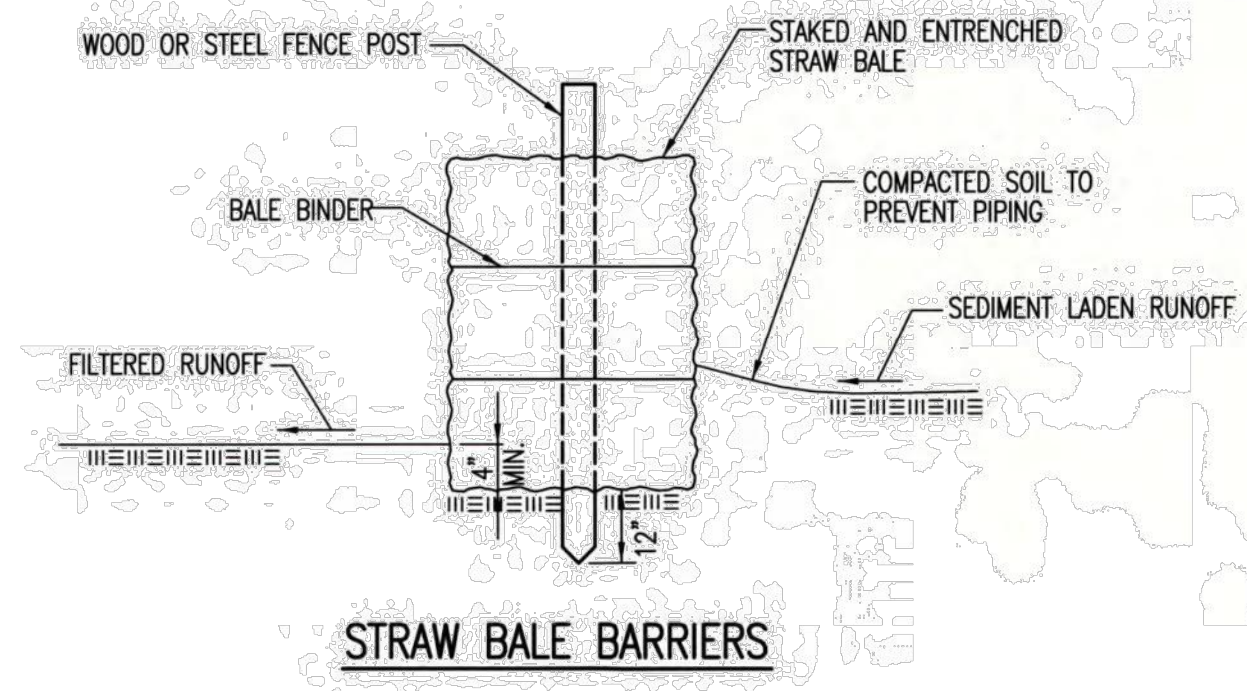
MATERIAL SPECIFICATION:
BALE AREA INLET BARRIERS SHOULD BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE. THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4" LONG.
TWINE SHOULD BE USED TO BIND BALES. THE USE OF WIRE BINDING IS PROHIBITED BECAUSE IT DOES NOT BIODEGRADE READILY.

PLACEMENT:
BALE AREA INLET BARRIERS SHOULD BE PLACED DIRECTLY AROUND THE PERIMETER OF A DROP INLET. WHEN A BALE AREA INLET BARRIER IS LOCATED NEAR AN INLET THAT HAS STEEP APPROACH SLOPES, THE STORAGE CAPACITY BEHIND THE BARRIER IS DRAMATICALLY REDUCED. TIMELY REMOVAL OF SEDIMENT MUST OCCUR FOR A BARRIER TO OPERATE PROPERLY IN THIS LOCATION.

PROPER INSTALLATION METHOD:
EXCAVATE A TRENCH AROUND THE PERIMETER OF THE AREA INLET THAT IS AT LEAST 4" DEEP BY A BALE'S WIDTH WIDE.
PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. SOME BALES MAY NEED TO BE SHORTENED TO FIT INTO THE TRENCH AROUND THE AREA INLET. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS.
STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND.
ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE RECEIVING SIDE OF THE BARRIER AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP.
NOTE: WHEN A BALE AREA INLET BARRIER IS PLACED IN A SHALLOW MEDIAN DITCH, MAKE SURE THAT THE TOP OF THE BARRIER IS NOT HIGHER THAN THE PAVED ROAD. IN THIS CONFIGURATION, WATER MAY SPREAD ONTO THE ROADWAY CAUSING A HAZARDOUS CONDITION.

LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:
BALES SHOULD BE PLACED DIRECTLY AGAINST THE PERIMETER OF THE AREA INLET. THIS ALLOWS OVERTOPPING WATER TO FLOW DIRECTLY INTO THE INLET INSTEAD OF ONTO NEARBY SOIL CAUSING SCOUR.
BALE AREA INLET BARRIERS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE BARRIER.

INSPECTION AND MAINTENANCE:
BALE AREA INLET BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:
DOES WATER FLOW UNDER THE AREA INLET BARRIER?
DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
ARE ANY BALES DISLODGED?
ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE AREA INLET BARRIER?



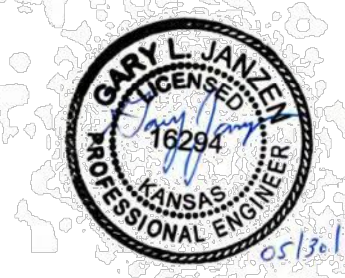
MATERIAL SPECIFICATION:
BALE SLOPE BARRIERS MAY BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE. THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4" LONG.
TWINE SHOULD BE USED TO BIND BALES. THE USE OF WIRE BINDING IS PROHIBITED BECAUSE IT DOES NOT BIODEGRADE READILY.

PLACEMENT:
A SLOPE BARRIER SHOULD BE USED AT THE TOE OF A SLOPE WHEN A DITCH DOES NOT EXIST. THE SLOPE BARRIER SHOULD BE PLACED ON NEARLY LEVEL GROUND 5' TO 10' AWAY FROM THE TOE OF A SLOPE. THE BARRIER IS PLACED AWAY FROM THE TOE OF THE SLOPE TO PROVIDE ADEQUATE STORAGE FOR SETTLING OUT SEDIMENT.
WHEN PRACTICABLE, BALE SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW.
BALE SLOPE BARRIERS CAN ALSO BE PLACED ALONG RIGHT-OF-WAY FENCE LINES TO KEEP SEDIMENT FROM CROSSING ONTO ADJACENT PROPERTY. WHEN PLACED IN THIS MANNER, THE SLOPE BARRIER WILL NOT LIKELY FOLLOW CONTOURS.

PROPER INSTALLATION METHOD:
EXCAVATE A TRENCH THE LENGTH OF THE PLANNED SLOPE BARRIER THAT IS 4" DEEP AND A BALE'S WIDTH WIDE. MAKE SURE THAT THE TRENCH IS EXCAVATED ALONG A SINGLE CONTOUR. WHEN PRACTICABLE, SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. PLACE THE SOIL ON THE UPSLOPE SIDE OF THE TRENCH FOR LATER USE.
PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE ALONG THE CENTERLINE OF THE DITCH CHECK, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS. STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND.
ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE UPSLOPE SIDE OF THE CHECK AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP.

LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:
WHEN PRACTICAL, DO NOT PLACE BALE SLOPE BARRIERS ACROSS CONTOURS. SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. CONCENTRATED FLOW OVER A SLOPE BARRIER CREATES A SCOUR HOLE ON THE DOWNSLOPE SIDE OF THE BARRIER. THE SCOUR HOLE EVENTUALLY UNDERMINES THE BALES AND THE BARRIER FAILS.
DO NOT PLACE BALE SLOPE BARRIERS IN AREAS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE BARRIER IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT.
BALE SLOPE BARRIERS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE BARRIER.

INSPECTION AND MAINTENANCE:
BALE SLOPE BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:
ARE THERE ANY POINTS ALONG THE SLOPE BARRIER WHERE WATER IS CONCENTRATING?
DOES WATER FLOW UNDER THE SLOPE BARRIER?
DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
ARE ANY BALES DISLODGED?
ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE SLOPE BARRIER?





CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

STRAW BALE DITCH CHECK AND BARRIER DETAILS

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER: _____ OCA NUMBER: _____ DATE: _____

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET: _____

ISSUE/REVISION RECORD

DATE	DESCRIPTION
06/02/15	COORDINATION SET
06/29/15	PERMIT SET
07/24/15	PERMIT RESUBMITTAL
08/03/15	BID SET
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09/25/15	CONSTRUCTION SET

PROFESSIONAL SEAL

PROFESSIONAL IN CHARGE
JOHN NOURZAD
PROFESSIONAL ENGINEER
LICENSE NO. 15701

PROJECT MANAGER
BRIAN OLESEN

QUALITY CONTROL
LARRY DIEHL

DRAWN BY
PETIA STOYANOVÁ-POUHALEVA

PROJECT NAME
BUBBA'S 33

WICHITA KANSAS
412 S. TOWNE EAST DRIVE



PROJECT NUMBER
201405680.0

SHEET TITLE
EROSION DETAILS

SHEET NUMBER
C7.4

PHASE 1 - INITIAL EARTHWORK AND UTILITIES (EXCEPT STORM SEWER)

LEGEND

- DRAINAGE FLOW PATH
- RIDGE LINES
- × POINT OF COMPLIANCE
- S.H. SILT FENCE OR HAY BALE BARRIER
- DRAINAGWAY FLOWLINE

- DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, THE POINTS OF COMPLIANCE ARE THE PERIMETER BOUNDARIES AND ANY DRAINAGE WAYS OR STORM SEWERS DRAINING THROUGH OR FROM THE SITE. SHOULD LAKES BE CONSTRUCTED WITHIN THE SUBDIVISION THAT WILL DISCHARGE DURING STORMS, THEY ARE ALSO A POINT OF COMPLIANCE.
- HAY BALES OR SILT FENCE MUST BE CONSTRUCTED ALONG THE PROPERTY LINE WHERE ON SITE WATER CAN DRAIN OFF THE PROPERTY. THESE EROSION CONTROL DEVICES WILL ALSO BE INSTALLED ALONG ANY DRAINAGE DITCH OR LAKE THAT CAN DISCHARGE.
- SHOULD SILT OR SEDIMENT ENTER THE DITCHES OR STREETS ON THE ADJACENT BOUNDARY STREETS, APPROPRIATE EROSION CONTROL DEVICES WILL BE PLACED WITHIN THE SUBDIVISION TO PREVENT THIS.
- ANY MUD TRACKED ONTO ADJACENT STREETS WILL BE REMOVED WITHIN 48 HOURS OR BY FRIDAY AT 6:00 PM, WHICHEVER IS EARLIER.
- CONTRACTORS WORKING WITHIN THE SITE WILL NOT BE REQUIRED TO USE INDIVIDUAL EROSION CONTROL DEVICES AS LONG AS THOSE SPECIFIED ABOVE ARE IN PLACE AND EFFECTIVE. CONTRACTORS WORKING ON THE BOUNDARY LINE STREETS OR ON ADJACENT PROPERTIES TO EXTEND UTILITIES ARE EXPECTED TO USE EROSION CONTROL DEVICES AT THEIR WORK LOCATIONS, AS NEEDED.
- UTILIZE STABILIZED CONSTRUCTION ENTRANCE AT ENTRANCE AND EXIT ONTO ANY EXISTING PUBLIC STREETS.
- IF THE INITIAL EARTH WORK AND UTILITIES ARE DONE AS PART OF A PUBLIC IMPROVEMENT PROJECT, THESE EROSION CONTROL DEVICES WILL BE INSTALLED BY THE CONTRACTOR AS SPECIFIED IN THE INDIVIDUAL PROJECT CONTRACTS. THE CONTRACTOR WILL MAINTAIN THE DEVICES UNTIL COMPLETION OF THE CONTRACT, AT WHICH TIME THE DEVELOPER WILL ASSUME MAINTENANCE RESPONSIBILITIES. IF THESE CONTRACTS ARE NOT PUBLIC IMPROVEMENT PROJECTS, THE DEVELOPER WILL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THESE DEVICES.
- WITHIN 14 DAYS OF COMPLETION OF EARTHWORK ACTIVITIES IN ANY GIVEN AREA, THAT AREA SHALL BE TEMPORARILY OR PERMANENTLY SEEDED AND MULCHED.

PHASE 3 - STREET CONSTRUCTION

LEGEND

- NEW STREETS
- × ADDITIONAL POINTS OF COMPLIANCE

- DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, NEW STREETS ARE INSTALLED. ALL EROSION CONTROL DEVICES INSTALLED DURING PHASE 1 AND 2 MUST STILL BE MAINTAINED. THE POINT OF COMPLIANCE NOW SHIFTS TO THE BACK OF CURB ALONG EACH STREET.
- CURB OPENING INLET PROTECTION:
 - SUMP AREAS - INLET PROTECTION SHALL BE PROVIDED WHEN STREET SUBGRADE WORK IS COMPLETED.
 - NON-SUMP LOCATIONS - PROVIDE INLET PROTECTION AS SOON AS BASE COURSE ASPHALT IS INSTALLED, BEFORE THE SURFACE COURSE LIFT.
- EROSION CONTROL DEVICES WILL BE REQUIRED BACK OF CURB WHEREVER WATER CAN FLOW OVER THE CURB AND THE CURB HAS BEEN BACKFILLED TO WITHIN 3" OR LESS OF THE TOP OF CURB (SEE CURB BACKFILL DETAIL). FOR CURBS NOT YET ENTIRELY BACKFILLED (3" OR MORE BELOW TOP OF CURB), ADDITIONAL DEVICES WILL BE REQUIRED AT POINTS WHERE WATER BREAKS OVER CURB WHICH COULD RESULT IN THE PLACEMENT OF SEDIMENT IN THE GUTTER.
- SEE DETAIL SHEET FOR BACK OF CURB PROTECTION.
- THE BACK OF CURB PROTECTION SPECIFIED ON THIS PLAN MAY HAVE TO BE SUPPLEMENTED WITH HAY BALE OR SILT FENCE EROSION CONTROL DEVICES AT LOCATIONS WHERE CONCENTRATED FLOW RESULTS IN SEDIMENT BEING CARRIED OVER THE EXCELSIOR MATS.
- THE STREET CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING BACK OF CURB EROSION CONTROL DEVICES.
- THE INDIVIDUAL LOT OWNERS WILL BE RESPONSIBLE FOR MAINTAINING THE BACK OF CURB EROSION CONTROL DEVICES IN FRONT OF THEIR LOTS UNTIL SUCH TIME AS ADJACENT DISTURBED EARTH IS STABILIZED WITH GRASS OR SOD.

PHASE 2 - INSTALLATION OF STORM SEWER

LEGEND

- PROPOSED NEW STREETS
- CURB INLETS
- AREA DRAINS
- IP INLET PROTECTION

- DURING THIS PHASE OF SUBDIVISION DEVELOPMENT, ALL EROSION CONTROL DEVICES REQUIRED IN PHASE 1 SHALL REMAIN IN PLACE AND BE MAINTAINED.
- AS NEW STORM SEWERS, WITH INLETS, ARE INSTALLED, THE STORM SEWERS MUST NOW BE PROTECTED SO ALL NEW INLETS BECOME POINTS OF COMPLIANCE.
- AREA DRAINS - AS SOON AS WATER CAN FLOW INTO THESE DRAINS, HAY BALE OR SILT FENCE PROTECTION WILL BE INSTALLED AROUND THEM.
- CURB OPENING INLETS - AS SOON AS WATER CAN FLOW INTO THESE DRAINS, INLET PROTECTION DEVICES MUST BE INSTALLED. IF WATER CANNOT FLOW INTO CURB INLETS UNTIL STREET CONSTRUCTION IS COMPLETE, THEN STREET CONTRACTOR WILL INSTALL INLET PROTECTION. SEE PHASE 3 - STREET CONSTRUCTION.
- THE STORM SEWER CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING THESE DEVICES.
- THE SUBDIVISION DEVELOPER WILL MAINTAIN THESE EROSION CONTROL DEVICES ONCE INSTALLED.
- ALL DISTURBED GROUND WILL BE FINAL GRADED AND TEMPORARILY OR PERMANENTLY SEEDED WITHIN 14 DAYS IF COMPLETION OF WORK IN ANY GIVEN PART OF THE SUBDIVISION.
- ONCE ALL DISTURBED GROUND DRAINING TO AN INLET HAS BEEN RESTABILIZED WITH GRASS OR SOD, THE SUBDIVISION DEVELOPER WILL BE RESPONSIBLE FOR PERMANENTLY REMOVING THE INLET PROTECTION.

GENERAL NOTES

- THE INTENT OF ALL EROSION CONTROL DEVICES IS TO PREVENT ERODED SOIL FROM ENTERING DITCHES, STORM SEWERS, LAKES, STREETS OR ANY OTHER OTHER DRAINAGE FEATURE.
- THIS SHEET IS INTENDED TO PROVIDE GUIDELINES AS TO WHAT TYPE OF EROSION CONTROL DEVICES WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS. CONTRACTORS ARE EXPECTED TO BID PROJECTS ACCORDINGLY.
- EROSION CONTROL DEVICES SHALL BE MAINTAINED DURING THE CONSTRUCTION PROCESS TO REMAIN EFFECTIVE. MAINTENANCE SHALL BE AS INDICATED ON SOIL EROSION BMP'S DETAIL SHEETS.
- PERSONS DESTROYING EROSION CONTROL DEVICES SHALL BE RESPONSIBLE FOR IMMEDIATELY REPAIRING THEM OR INSTALLING SUITABLE REPLACEMENT DEVICES.
- THE DEVELOPMENT OF ANY SUBDIVISION THAT DISTURBS 1 ACRE OR MORE WILL REQUIRE A FEDERAL/STATE NPDES STORMWATER PERMIT. THE PREPARATION OF A STORMWATER POLLUTION PREVENTION PLAN IS REQUIRED. EROSION CONTROL DEVICES ARE REQUIRED. THE DETAILS SHOWN ON THIS SHEET ARE THE MINIMUM STANDARDS TO BE SHOWN ON POLLUTION PREVENTION PLANS.
- FOR SUBDIVISIONS SMALLER THAN 1 ACRE, SOIL EROSION DEVICES ARE REQUIRED. ALSO, DEVELOPERS AND CONTRACTORS ARE ENCOURAGED TO DEVELOP POLLUTION PREVENTION PLANS FOR EACH PROJECT PRIOR TO CONSTRUCTION.
- FAILURE TO USE AND MAINTAIN SOIL EROSION DEVICES IS A VIOLATION OF SECTION 16.32 OF THE CITY CODE AND WILL SUBJECT THE SUBDIVISION DEVELOPER AND CONTRACTORS TO THE PENALTIES PROVIDED THEREIN.
- THE APPLICATION OF EROSION CONTROL DEVICES SHOWN ON THIS SHEET IS FOR SITUATIONS NORMALLY ENCOUNTERED. FROM TIME TO TIME, SITUATIONS WILL ARISE THAT MAY REQUIRE DEVICES OTHER THAN THAT SHOWN. EROSION CONTROL DEVICES, OTHER THAN THOSE SHOWN, MAY BE UTILIZED SO LONG AS THEY ARE EFFECTIVE AND MAINTAINED.
- A STABILIZED EARTH SURFACE IS DEFINED AS ONE THAT IS HARD SURFACED WITH CONCRETE, ASPHALT, OR THE LIKE, OR ONE ON WHICH 70% OF THE GRASS HAS GERMINATED ON THE ENTIRE SURFACE.

SEE DETAIL SHEET FOR
BACK OF CURB PROTECTION DETAIL

CURB BACKFILL DETAIL (STREET CONSTRUCTION ONLY)

THIS IS A TEMPORARY MEASURE ONLY, WHEN APPROVED BY THE PROJECT ENGINEER. THE DIRT GRADE BEHIND THE CURB SHALL BE BROUGHT TO THE TOP OF CURB, WITH TEMPORARY EROSION CONTROL MAT OR PERMANENT VEGETATION PLACED, PRIOR TO THE COMPLETION OF ALL PROJECTS.

REVISION DATE: MAY 2013

05/13/13

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

SUBDIVISION DEVELOPMENT PROCESS

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE

CITY ENGINEER'S OFFICE
CITY HALL - SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202-1620
(316) 268-4501

SHEET

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ISSUE/REVISION RECORD

DATE	DESCRIPTION
06/02/15	COORDINATION SET
06/29/15	PERMIT SET
07/24/15	PERMIT RESUBMITTAL
08/03/15	BID SET
08/31/15	PPD REVISIONS
09/25/15	CONSTRUCTION SET

PROFESSIONAL SEAL

PROFESSIONAL IN CHARGE
JOHN NOURZAD
PROFESSIONAL ENGINEER
LICENSE NO. 15701

PROJECT MANAGER
BRIAN OLESEN

QUALITY CONTROL
LARRY DIEHL

DRAWN BY
PETIA STOYANOVA-POUHALEVA

PROJECT NAME
BUBBA'S 33

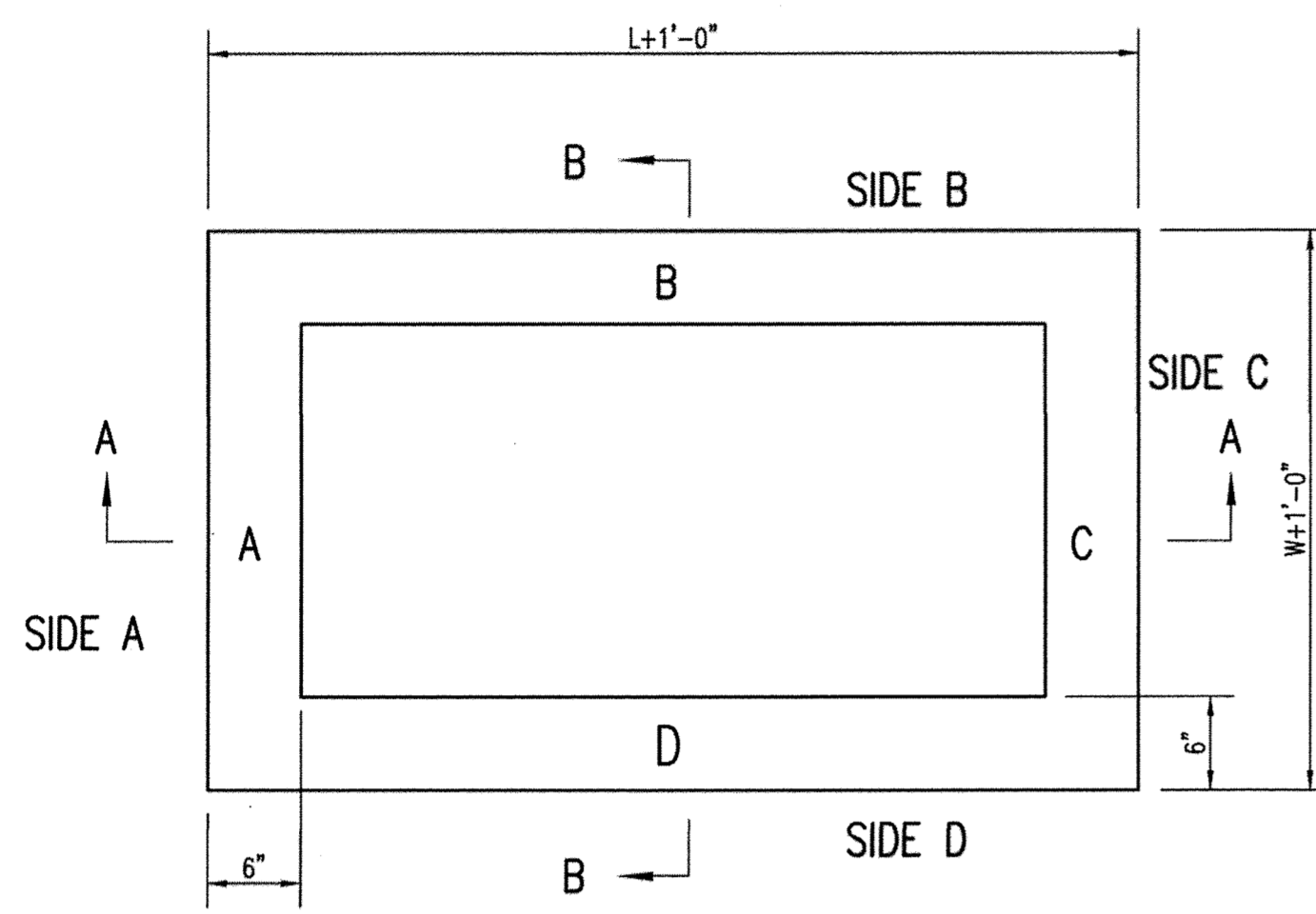
WICHITA KANSAS
412 S. TOWNE EAST DRIVE



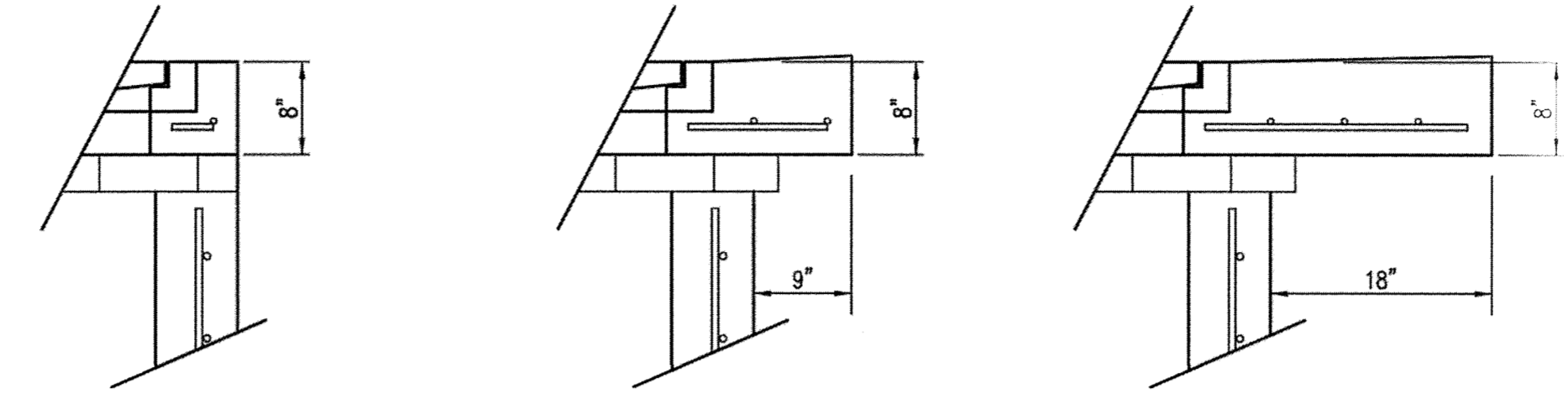
PROJECT NUMBER
201405680.0

SHEET TITLE
EROSION DETAILS

SHEET NUMBER
C7.6



TOP VIEW



**FLUSH STYLE TOP
NO APRON**

**9" APRON
* APRON TO EXTEND ON ALL 4 SIDES OF INLET.
DESIGNER TO DESIGNATE APRON SIZE.**

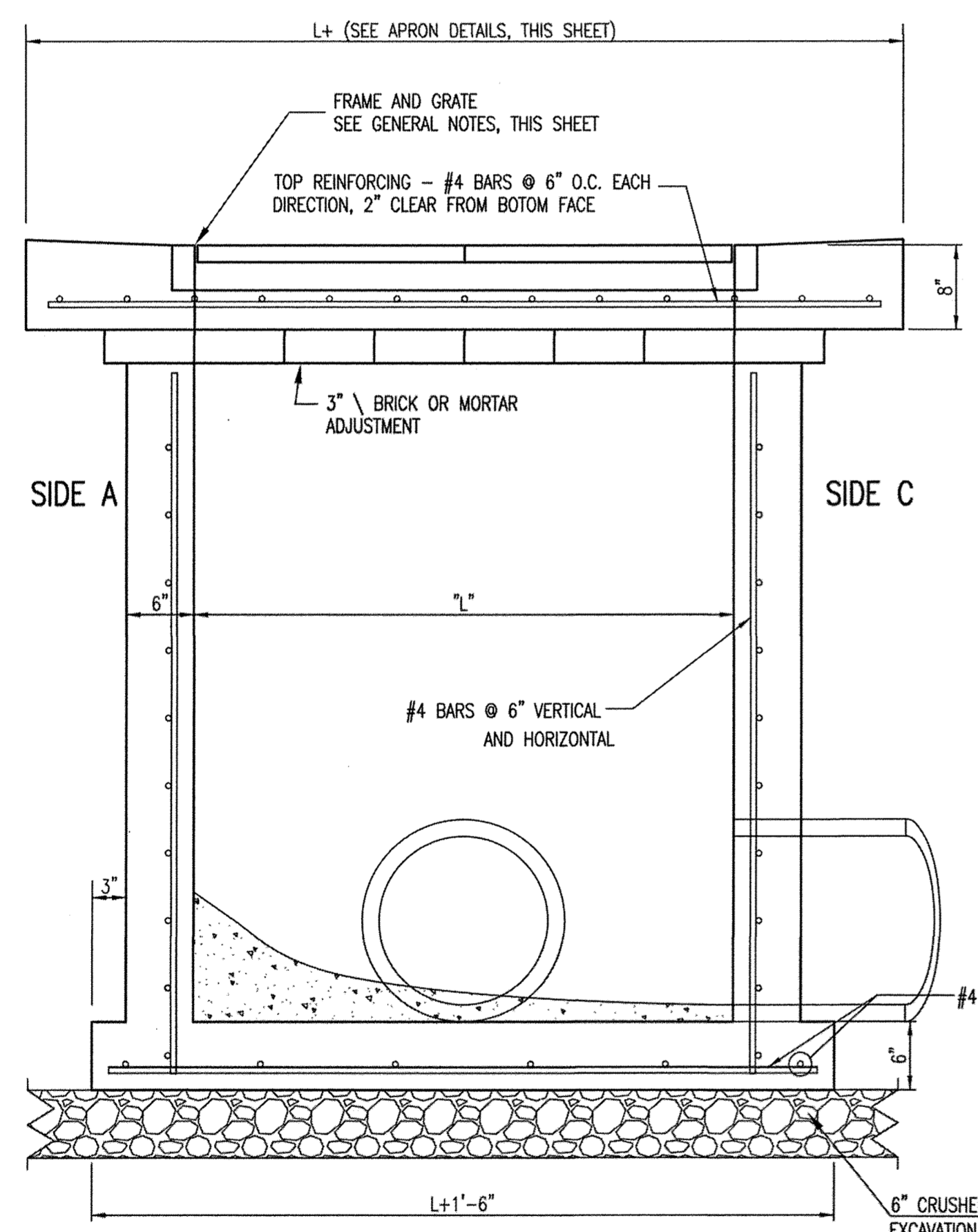
18" APRON

W=2' and L=2' for SINGLE DROP INLET
W=2' and L=4' for DOUBLE DROP INLET

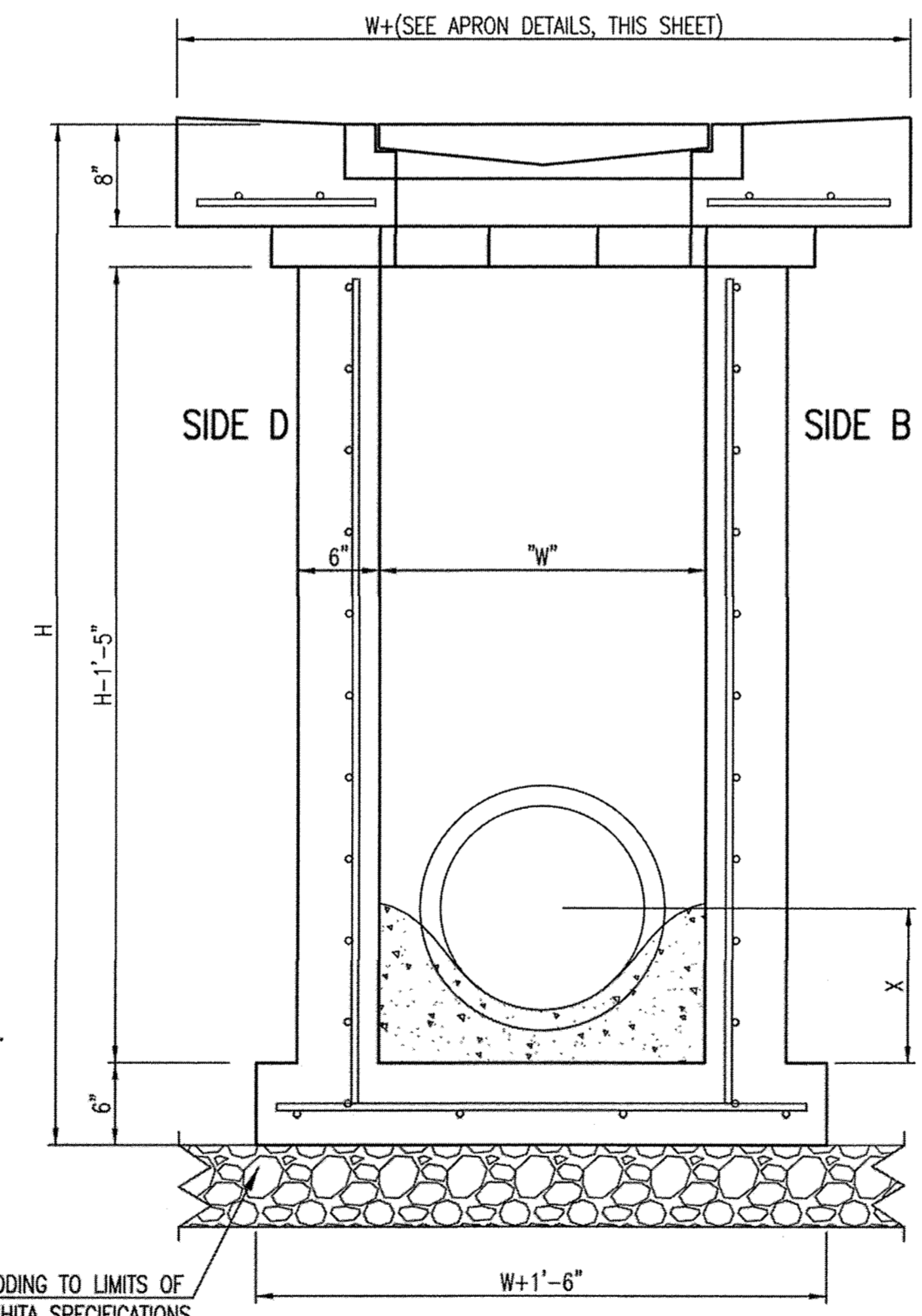
The structure(s) on this detail sheet are designed for HS-20 loading at these specific dimensions only. If larger dimensions are required, the ENGINEER shall provide a project specific structure design for approval by the City Engineer's office.

GENERAL NOTES

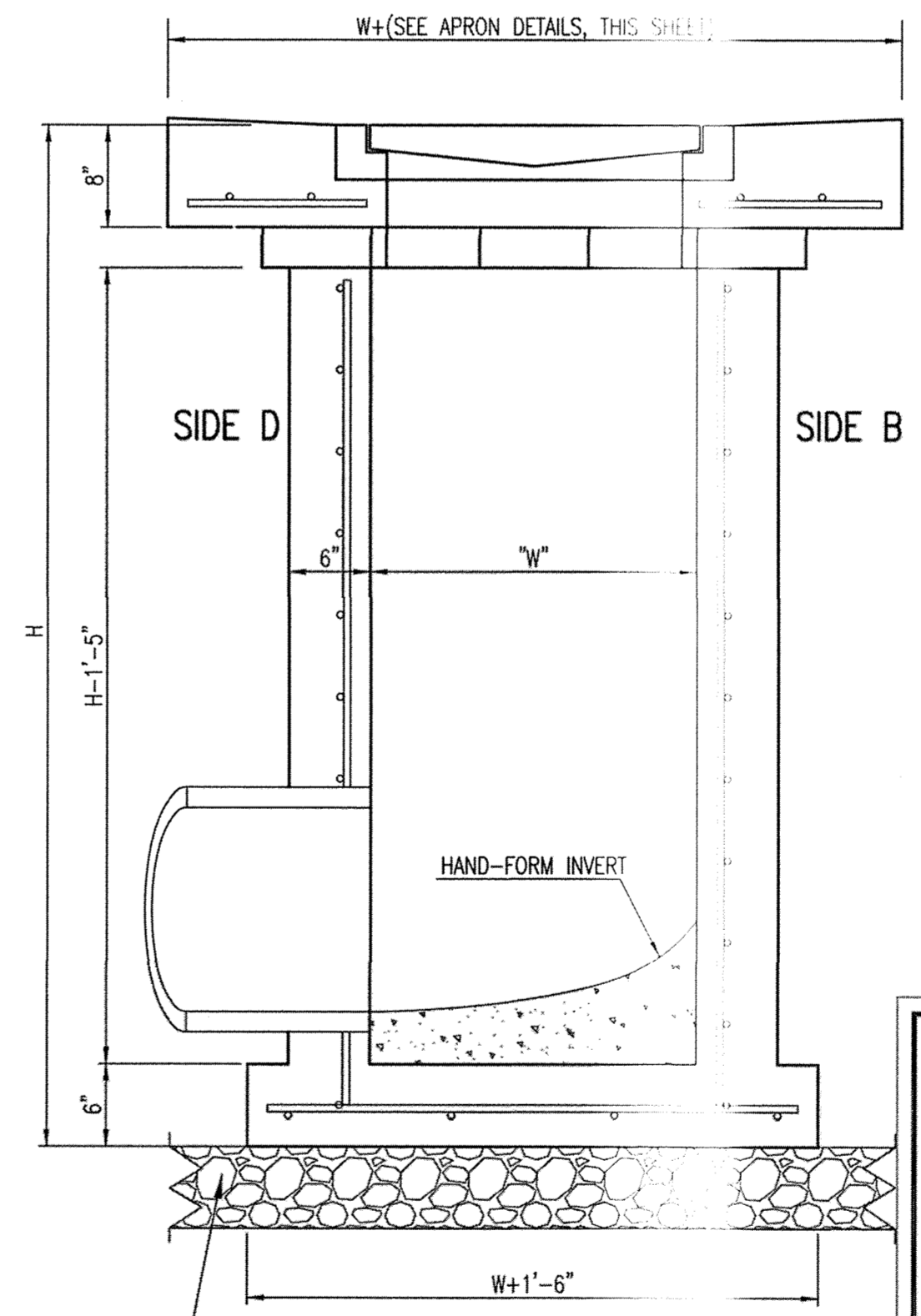
1. GRATE FRAME TO BE INSTALLED ON THIN MORTAR CUSHION TO INSURE FULL SUPPORT ALONG BRICK. CONCRETE USED FOR INLET CONSTRUCTION SHALL CONFORM TO CITY OF WICHITA SPECIFICATIONS FOR CONCRETE PAVEMENT MIX.
2. INLET INVERT SHALL BE SHAPED WITH 8 SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.
3. THE ENDS OF ALL PIPES INSTALLED IN INLETS SHALL BE CUT OFF FLUSH WITH THE INSIDE FACE OF THE INLET WALL.
4. INLET FRAME AND GRATE TO BE DEETER #2433, EJIW #5391-Z1 OR APPROVED EQUAL FOR 2'x2' SINGLE DROP INLET AND DEETER #2434, EJIW #5391 Z3 OR APPROVED EQUAL FOR 2'x4' DOUBLE DROP INLET.
5. CONTRACTOR SHALL REMOVE LIFTING HOOKS AFTER INSTALLATION. RECESSES IN INLET WALL SHALL BE GROUTED FLUSH TO THE INLET WALL WITH HYDRAULIC CEMENT AFTER THE INLET IS IN PLACE. LIFTING HOLES THRU THE INLET WALL WILL NOT BE ACCEPTED.



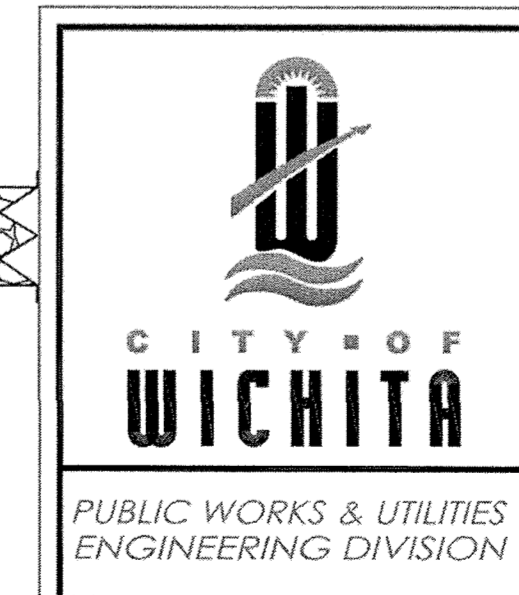
SECTION "A-A"



**SECTION "B-B"
END OUTLET**



**SECTION "B-B"
SIDE OUTLET**



REVISED: MARCH 2015

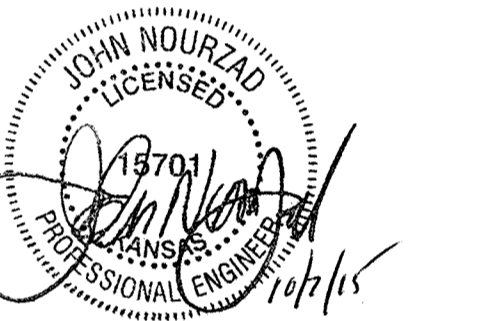
SINGLE/DOUBLE DROP INLET		
CITY ENGINEER GARY JANZEN, P.E.		
PROJECT NUMBER	OCA NUMBER	DATE
CITY ENGINEER'S OFFICE	SHEET	
CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		

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DATE	DESCRIPTION
06/02/15	COORDINATION SET
06/29/15	PERMIT SET
07/24/15	PERMIT RESUBMITTAL
08/03/15	BID SET
08/31/15	PPD REVISIONS
09/25/15	CONSTRUCTION SET

PROFESSIONAL SEAL



PROFESSIONAL IN CHARGE
JOHN NOURZAD
PROFESSIONAL ENGINEER
LICENSE NO. 15701

PROJECT MANAGER
BRIAN OLESEN

QUALITY CONTROL
LARRY DIEHL

DRAWN BY
PETIA STOYANOVA-POUHALEVA

PROJECT NAME

BUBBA'S 33

**WICHITA
KANSAS**
412 S. TOWNE EAST DRIVE



PROJECT NUMBER
201405680.0

SHEET TITLE
**STORM WATER
DETAILS**

SHEET NUMBER
C7.7

LANDSCAPE ELEVATION NOTES:

LANDSCAPE ELEVATIONS ARE FOR GENERAL REFERENCE ONLY, REFER TO LANDSCAPE PLAN FOR ACTUAL PLANTING INSTALLATION.

BEFORE ANY PLANTING OCCURS, DISCUSS THE FOLLOWING WITH YOUR LANDSCAPE PROVIDER:

1. AMOUNT OF SOIL AROUND NEW PLANTINGS
2. DEPTH OF SOIL UNDERNEATH PLANINGS
3. SOIL ACIDITY
4. DRAINAGE REQUIREMENTS

GENERAL EVERGREEN MAINTENANCE GUIDELINES:

1. DEPENDING ON SOIL TYPE, SOIL DRAINAGE CAPABILITIES, AND SEASONAL TEMPERATURE, GENERALLY WATER THOROUGHLY AT TIME OF PLANTING AND TWICE WEEKLY FOR A MONTH FOLLOWING PLANTING.

2. DECREASE THE FREQUENCY OF WATERING SO THAT YOU ONLY IRRIGATE ONCE EVERY WEEK OR TWO DURING PERIODS OF EXTENDED DROUGHTS

3. THEY ARE MORE LIKELY TO SUFFER FROM OVERWATERING OR DISEASES ENCOURAGED BY EXCESSIVE MOISTURE THAN DROUGHT STRESSES.

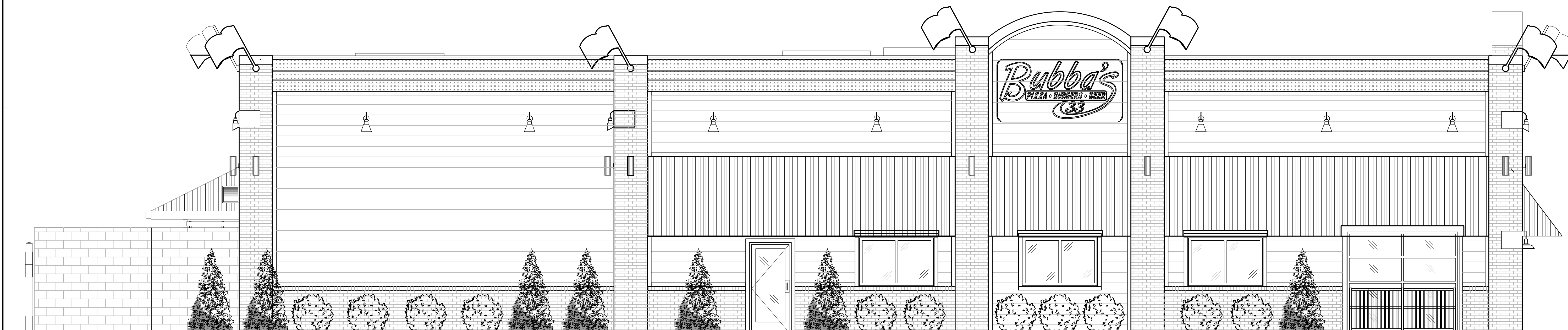
4. AFTERWARD, THE SHRUB IS DROUGHT TOLERANT AND CAN MAKE DUE WITH WHAT NATURE PROVIDES.

5. FERTILIZE ANNUALLY.

6. PRUNE LIGHTLY, ONLY CUTTING OFF DEAD BRANCHES IN THE LOWER PART OF THE SHRUB TO IMPROVE AIR CIRCULATION AND TRIMMING OFF TIPS OF BRANCHES THAT

ARE OVERLY VIGOROUS OR GROWING INTO A PATH. NEVER MAKE CUTS INTO NEEDLE-LESS WOOD, AS NO NEW GROWTH WILL EMERGE FROM THIS PORTION AND IT WILL BE LEFT WITH BARE SPOTS.

IF YOU EXPERIENCE REPEATED ISSUES AND MULTIPLE SHRUBS DYING, PLEASE CONTACT YOUR LANDSCAPE MAINTENANCE PROVIDER FOR MORE INFORMATION



UPRIGHT EVERGREEN SHRUB (7 HT. TYP.)

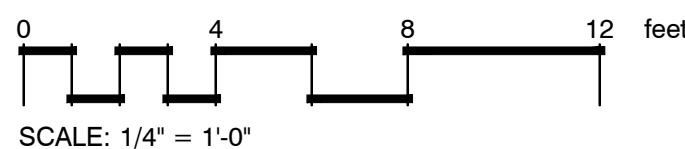
EVERGREEN SHRUB (36" HT. TYP.)

UPRIGHT EVERGREEN SHRUB (7 HT. TYP.)

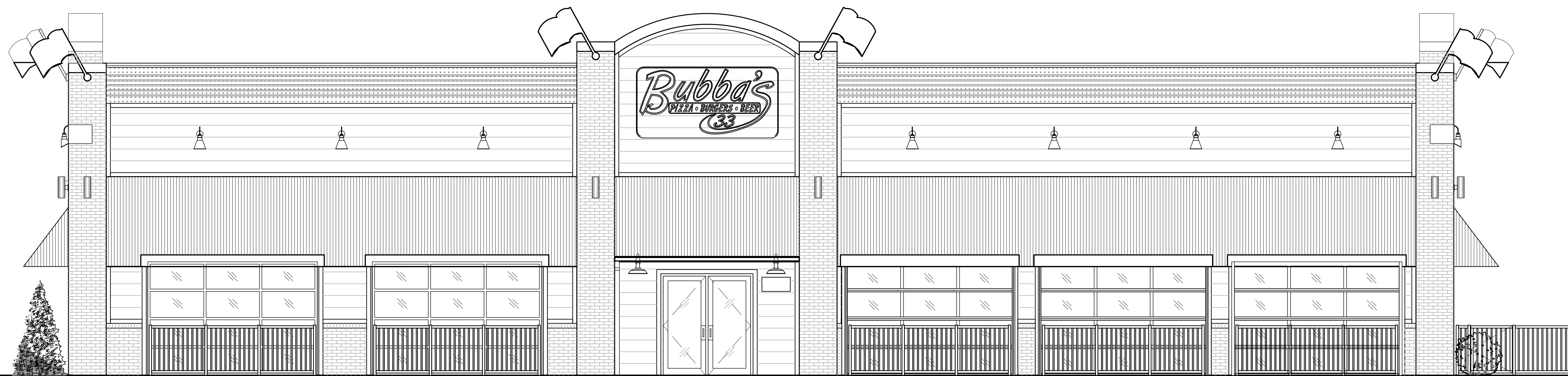
EVERGREEN SHRUB (36" HT. TYP.)

UPRIGHT EVERGREEN SHRUB (7 HT. TYP.)

WEST ELEVATION



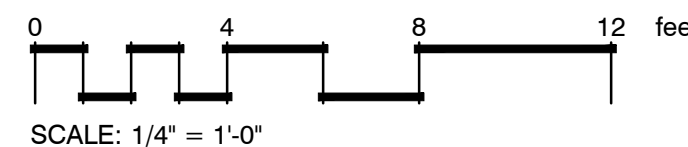
SHRUB HEIGHT MEASUREMENTS ARE TO BE AS MEASURED FROM TOP OF ROOTBALL (TYP.)



UPRIGHT EVERGREEN SHRUB (7 HT. TYP.)

EVERGREEN SHRUB (36" HT. TYP.)

SOUTH ELEVATION



SHRUB HEIGHT MEASUREMENTS ARE TO BE AS MEASURED FROM TOP OF ROOTBALL (TYP.)

PROJECT TEAM

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PROFESSIONAL SEAL

PROFESSIONAL IN CHARGE
JOHN NOURZAD
PROFESSIONAL ENGINEER
LICENSE NO. E-52559

PROJECT MANAGER
BRIAN OLESEN

QUALITY CONTROL
SUSAN KOUGIAS

DRAWN BY
SARAH DREIER

PROJECT NAME

BUBBA'S

WICHITA KANSAS

TOWNE EAST MALL & E. KELLOGG DRIVE N



PROJECT NUMBER
201405680.0

SHEET TITLE
LANDSCAPE ELEVATIONS

SHEET NUMBER

L3.0

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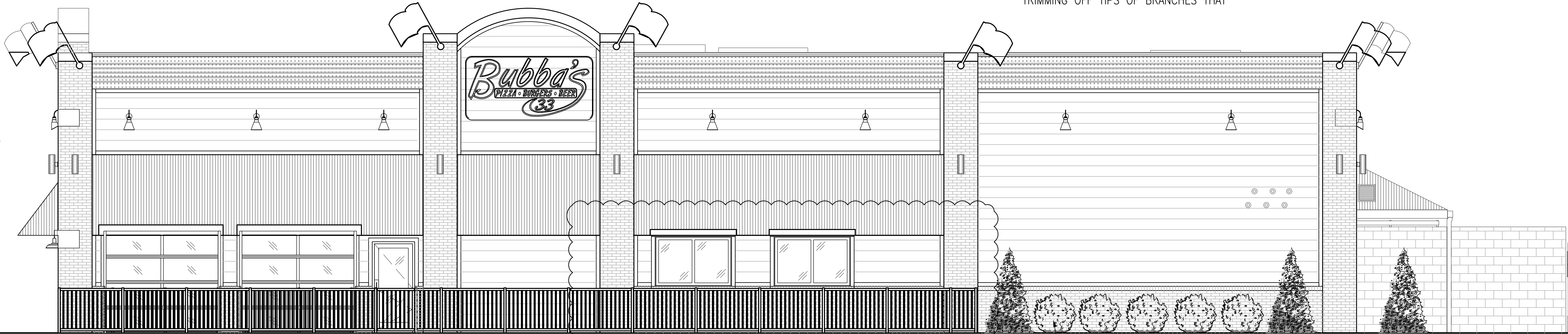
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5. FERTILIZE ANNUALLY.

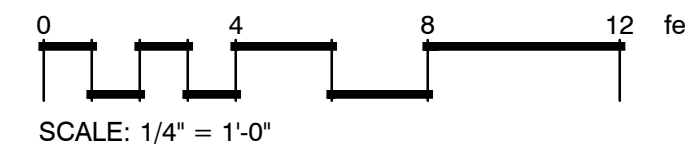
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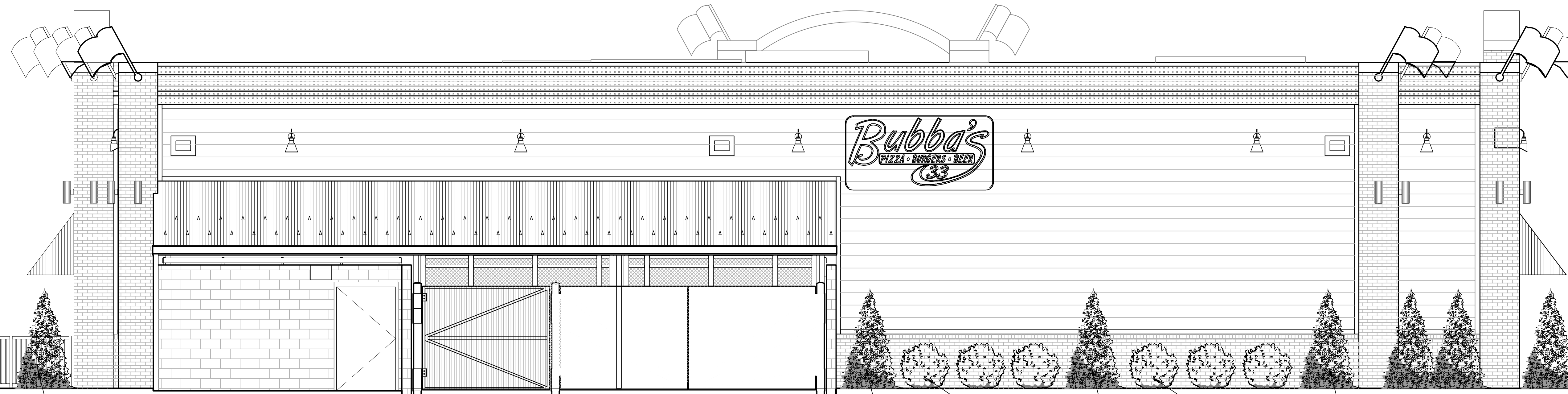
EAST ELEVATION



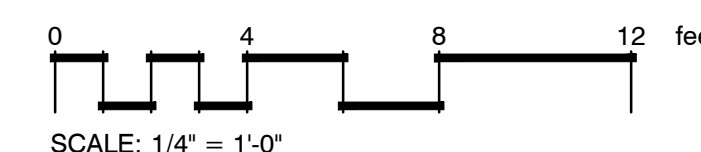
SHRUB HEIGHT MEASUREMENTS ARE TO BE AS MEASURED FROM TOP OF ROOTBALL (TYP.)

EVERGREEN SHRUB (36" HT. TYP.)

UPRIGHT EVERGREEN SHRUB (7' HT. TYP.)



NORTH ELEVATION



SHRUB HEIGHT MEASUREMENTS ARE TO BE AS MEASURED FROM TOP OF ROOTBALL (TYP.)

UPRIGHT EVERGREEN SHRUB (7' HT. TYP.)

UPRIGHT EVERGREEN SHRUB (7' HT. TYP.)

EVERGREEN SHRUB (36" HT. TYP.)

UPRIGHT EVERGREEN SHRUB (7' HT. TYP.)

EVERGREEN SHRUB (36" HT. TYP.)

UPRIGHT EVERGREEN SHRUB (7' HT. TYP.)

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SHEET TITLE
LANDSCAPE ELEVATIONS

SHEET NUMBER
L4.0