PRELIMINARY ENGINEERING PLANS FRANKLIN IWI PHASE 7A EXPANSION



700 BARTRAM PARKWAY FRANKLIN, INDIANA 46131

| UTILITY AND GOVERNING AGENCY CONTACTS | | | | | | |
|---------------------------------------|--|---|----------------|--|--|--|
| SERVICE / JURISDICTION | COMPANY / DEPT. | ADDRESS | PHONE NUMBER | CONTACT | | |
| DEPARTMENT OF PLANNING & ENGINEERING | CITY OF FRANKLIN DEPT. OF PLANNING & ENGINEERING | 70 E MONROE STREET FRANKLIN, IN 46131 | (877) 736-3631 | PLANNING: JOANNA MYERS ENGINEERING: MARK RICHARDS | | |
| SANITARY SEWER SERVICE | CITY OF FRANKLIN DEPT. OF PUBLIC WORKS | 796 SOUTH STATE STREET FRANKLIN, IN 46131 | (317) 736-3640 | RICK LITTLETON | | |
| WATER SERVICE | INDIANA AMERICAN WATER COMPANY | 110 SOUTH PARK BOULEVARD GREENWOOD, IN 46143 | (317) 807-2462 | JACQUELYNE SANDERS | | |
| ELECTRIC | JOHNSON COUNTY REMC | 750 INTERNATIONAL DRIVE FRANKLIN, IN 46131 | (317) 736-6174 | CHUCK BAILEY | | |
| TELEPHONE | CENTURYLINK | 1147 MORTON STREET FRANKLIN, IN 46131 | (317) 736-6630 | | | |
| FIRE DEPARTMENT | CITY OF FRANKLIN | 1800 THORNBURG LANE FRANKLIN, IN 46131 | (317) 346-1224 | BRYNE PURSIFULL | | |
| GAS | VECTREN ENERGY DELIVERY | 600 INDUSTRIAL DRIVE FRANKLIN, IN 46131 | (317) 736-2989 | STEVE WASHBURN | | |

| PROJECT TEAM | | | | | | |
|-----------------|-----------------------------------|--|----------------|-------------------|--|--|
| ROLE | COMPANY | ADDRESS | PHONE NUMBER | CONTACT | | |
| DEVELOPER/OWNER | TIPPMANN GROUP | 9009 COLDWATER ROAD FORT WAYNE, IN 46825 | (260) 490-3000 | JASON BRANSTETER | | |
| CIVIL ENGINEER | KIMLEY-HORN AND ASSOCIATES, INC. | 250 E. 96TH ST., STE 580 INDIANAPOLIS, IN 46240 | (317) 218-9560 | BRYAN SHEWARD, PE | | |
| ARCHITECT | PROJECT DESIGN & MANAGEMENT, INC. | 3922 NEW VISION DRIVE FORT WAYNE, IN 46845 | (260) 494-3480 | MARK REYNOLDS | | |
| LAND SURVEYOR | SEA GROUP, LLC | 494 GRADLE DRIVE CARMEL, IN 46032 | (317) 844-3333 | BRIAN RISMILLER | | |

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| | $\coprod \int \setminus$ | | | | SR 44 | | NORTH |
| E KING ST | N LOVERS LN | 1-65 | BARTRAM PKWY | | PROJ LOC | ECT ATION E 50 S | |
| GREENSBURG ROAD | | E 75 S | | | S 550 E | | |

JOHNSON COUNTY

CONSTRUCTION OF A ±112,790 SF WAREHOUSE EXPANSION FOR INTERSTATE WAREHOUSING IN SECTION 20 OF T12N, R5E IN THE CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA

PLANS PREPARED FOR: TIPPMANN CONSTRUCTION GROUP 9009 COLDWATER ROAD FT. WAYNE, INDIANA 46825

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National Flood Hazard Layer FIRMette NO SCREEN Area of Minimal Flood Hazard Zone Effective LOMRs



LEGAL DESCRIPTION

LOT 2-A IN FRANKLIN TECH PARK LOT 2-A AND BLOCK F, A REPLAT OF AMENDED LOT 2 AND BLOCK E OF FRANKLIN TECH PARK.





ORIGINAL ISSUE: 05/09/19 KHA PROJECT NO 170021004 SHEET NUMBER

C0.0

2. STANDARD SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS, AND RECURRING SPECIAL PROVISIONS. CONSTRUCTION PLANS. AND SUBSEQUENT DETAILS ARE ALL TO BE CONSIDERED AS PART OF THE CONTRACT. INCIDENTAL ITEMS OR ACCESSORIES NECESSARY TO COMPLETE THIS WORK MAY NOT BE SPECIFICALLY NOTED, BUT ARE CONSIDERED A PART OF THIS CONTRACT.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING THE UTILITY COMPANIES LOCATE THEIR FACILITIES IN THE FIELD PRIOR TO CONSTRUCTION AND SHALL ALSO BE RESPONSIBLE FOR THE MAINTENANCE AND PRESERVATION OF THESE FACILITIES. THE ENGINEER DOES NOT WARRANT THE LOCATION OF ANY EXISTING UTILITIES SHOWN ON THE PLAN. THE CONTRACTOR SHALL CALL INDIANA UTILITIES PROTECTION SERVICE (811 OR 1.800.362.2764) AND THE MUNICIPALITY FOR

NO CONSTRUCTION PLANS SHALL BE USED FOR CONSTRUCTION UNLESS SPECIFICALLY MARKED "FOR CONSTRUCTION" PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AFFECTING THE WORK WITH THE ACTUAL CONDITIONS AT THE JOB SITE. IN ADDITION. THE CONTRACTOR MUST VERIFY THE SURVEYOR'S LINE AND GRADE STAKES, IF THERE ARE ANY DISCREPANCIES WITH WHAT IS SHOWN ON THE CONSTRUCTION PLANS. HE/SHE MUST IMMEDIATELY REPORT THEM TO THE SURVEYOR OR FNGINFER BEFORE DOING ANY WORK, OTHERWISE, THE CONTRACTOR ASSUMES FULL RESPONSIBILITY. IN THE EVENT OF DISAGREEMENT BETWEEN THE CONSTRUCTION PLANS. SPECIFICATIONS, AND/OR SPECIAL DETAILS, THE CONTRACTOR SHALL SECURE WRITTEN INSTRUCTION FROM THE ENGINEER PRIOR TO PROCEEDING WITH ANY PART OF THE WORK AFFECTED BY OMISSIONS OR DISCREPANCIES. FAILING TO SECURE SUCH INSTRUCTION. THE CONTRACTOR WILL BE CONSIDERED TO HAVE PROCEEDED AT THE CONTRACTOR'S OWN RISK AND EXPENSE. IN THE EVENT OF ANY DOUBT OR OUFSTIONS ARISING WITH RESPECT TO THE TRUE MEANING OF THE CONSTRUCTION PLANS OR SPECIFICATIONS, THE DECISION OF THE ENGINEER SHALL BE FINAL AND CONCLUSIVE.

5. NOTIFICATION OF COMMENCING CONSTRUCTION:

THE CONTRACTOR SHALL NOTIFY AFFECTED GOVERNMENTAL AGENCIES IN WRITING AT LEAST THREE FULL WORKING DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION. IN ADDITION, THE 3. CONCRETE WORK CONTRACTOR SHALL NOTIFY, AS NECESSARY, ALL TESTING AGENCIES, THE MUNICIPALITY, AND THE OWNER SUFFICIENTLY IN ADVANCE OF CONSTRUCTION.

FAILURE OF THE CONTRACTOR TO ALLOW PROPER NOTIFICATION TIME WHICH RESULTS IN THE TESTING COMPANIES TO BE UNABLE TO VISIT THE SITE AND PERFORM TESTING WILL CAUSE THE CONTRACTOR TO SUSPEND THE OPERATION TO BE TESTED UNTIL THE TESTING AGENCY CAN SCHEDULE TESTING OPERATIONS. COST OF SUSPENSION OF WORK SHALL BE BORNE BY THE CONTRACTOR.

6. ALL CONTRACTORS SHALL KEEP ACCESS AVAILABLE AT ALL TIMES FOR ALL EMERGENCY TRAFFIC, AS DIRECTED BY THE MUNICIPALITY.

ALL PROPOSED GRADES SHOWN ON PLANS ARE FINISHED SURFACE ELEVATIONS, UNLESS NOTED OTHERWISE.

8. THE CONTRACTOR SHALL PRESERVE ALL CONSTRUCTION STAKES UNTIL THEY ARE NO LONGER NEEDED. ANY STAKES DESTROYED OR DISTURBED BY THE CONTRACTOR PRIOR TO THEIR USE SHALL BE RESET BY THE SURVEYOR AT THE CONTRACTOR'S EXPENSE

9. ALL FRAMES AND LIDS FOR STORM AND SANITARY SEWERS, VALVE VAULT COVERS. FIRE HYDRANTS. AND B-BOXES ARE TO BE ADJUSTED TO MEET FINISHED GRADE. THIS ADJUSTMENT IS TO BE MADE BY THE SEWER AND WATER CONTRACTOR, AND THE COST IS TO BE CONSIDERED INCIDENTAL. THESE ADJUSTMENTS TO FINISHED GRADE WILL NOT ALLEVIATE THE CONTRACTOR FROM ANY ADDITIONAL ADJUSTMENTS AS REQUIRED BY THE MUNICIPALITY UPON FINAL INSPECTION OF THE PROJECT. FINAL GRADES MAY BE DETERMINED BY THE MUNICIPALITY AND MAY VARY FROM PLAN GRADE.

10. ANY EXISTING SIGNS, LIGHT STANDARDS, AND UTILITY POLES THAT INTERFERE WITH CONSTRUCTION OPERATIONS AND ARE NOT NOTED ON THE PLANS FOR DISPOSAL SHALL BE REMOVED AND RESET BY THE CONTRACTOR AT HIS/HER OWN EXPENSE, AS DIRECTED BY THE ENGINEER. ANY DAMAGE TO THESE ITEMS SHALL BÉ REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS/HER OWN EXPENSE TO THE SATISFACTION OF THE OWNER. ANY SIGNS NOT REQUIRED TO BE RESET SHALL BE DELIVERED TO THE RESPECTIVE OWNERS.

11. REMOVAL OF SPECIFIED ITEMS, INCLUDING BUT NOT LIMITED TO, PAVEMENT, SIDEWALK, CURB, CURB AND GUTTER, CULVERTS, ETC., SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR AT THE CONTRACTOR'S OWN EXPENSE. THE CONTRACTOR IS RESPONSIBLE FOR ANY PERMITS REQUIRED FOR SUCH DISPOSAL

12. ANY FIELD TILES ENCOUNTERED SHALL BE INSPECTED BY THE MUNICIPALITY. THE DRAIN TILE SHALL BE CONNECTED TO THE STORM SEWER SYSTEM AND A RECORD KEPT BY THE CONTRACTOR OF THE LOCATIONS AND TURNED OVER TO THE MUNICIPALITY UPON COMPLETION THE PROJECT. THE COST OF THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT, AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.

13. BEFORE ACCEPTANCE, ALL WORK SHALL BE INSPECTED BY THE MUNICIPALITY, AS NECESSARY. 14. EASEMENTS FOR THE EXISTING UTILITIES, BOTH PUBLIC AND PRIVATE, AND UTILITIES WITHIN PUBLIC RIGHT-OF-WAYS ARE SHOWN ON THE PLANS ACCORDING TO AVAILABLE RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF THESE UTILITY LINES AND THEIR PROTECTION FROM DAMAGE DUE TO CONSTRUCTION OPERATIONS. IF EXISTING UTILITY LINES OF ANY NATURE ARE ENCOUNTERED WHICH CONFLICT WITH LOCATIONS OF THE NEW CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT MAY BE RESOLVED.

OWNER SHALL ORTAIN FASEMENTS AND APPROVAL OF PERMITS NECESSARY TO FACILITATE CONSTRUCTION OF THE PROPOSED UTILITIES. THE CONTRACTOR, HOWEVER, SHALL FURNISH ALL REQUIRED BONDS AND EVIDENCE OF INSURANCE NECESSARY TO SECURE THESE PERMITS AND

16. THE CONTRACTORS SHALL PLAN THEIR WORK BASED ON THEIR OWN BORINGS, EXPLORATIONS, AND OBSERVATIONS TO DETERMINE SOIL CONDITIONS AT THE LOCATION OF THE PROPOSED

17. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR SAFETY ON THE JOB PER OSHA REGULATIONS.

18. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO PROVIDE PROPER BARRICADING, WARNING DEVICES, AND THE SAFE MANAGEMENT OF TRAFFIC WITHIN THE AREA OF CONSTRUCTION, ALL SUCH DEVICES AND THEIR INSTALLATION SHALL CONFORM TO THE MANUAL | 5.1. OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREET AND HIGHWAYS, LATEST EDITION, AND IN ACCORDANCE WITH THE MUNICIPAL ORDINANCES.

19. THE CONTRACTOR SHALL COLLECT AND REMOVE ALL CONSTRUCTION DEBRIS, EXCESS MATERIALS, TRASH, OIL AND GREASE RESIDUE, MACHINERY, TOOLS, AND OTHER MISCELLANEOUS ITEMS WHICH WERE NOT PRESENT PRIOR TO PROJECT COMMENCEMENT AT NO ADDITIONAL EXPENSE TO THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ANY AND ALL PERMITS NECESSARY FOR THE HAULING AND DISPOSAL REQUIRED FOR CLEANUP, AS DIRECTED BY THE ENGINEER OR OWNER. BURNING ON THE SITE IS NOT PERMITTED.

20. NO UNDERGROUND WORK SHALL BE COVERED UNTIL IT HAS BEEN APPROVED BY THE MUNICIPALITY. APPROVAL TO PROCEED MUST BE OBTAINED FROM THE MUNICIPALITY PRIOR TO INSTALLING PAVEMENT BASE, BINDER, AND SURFACE, AND PRIOR TO POURING ANY CONCRETE AFTER FORMS HAVE BEEN SET. AS NECESSARY.

21. ALL EXISTING UTILITIES OR IMPROVEMENTS, INCLUDING WALKS, CURBS, PAVEMENT, AND PARKWAYS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE PROMPTLY RESTORED TO THEIR RESPECTIVE ORIGINAL CONDITION. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT UNLESS A PAY ITEM IS LISTED ON THE BID LIST.

22. AT THE CLOSE OF EACH WORKING DAY AND AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE STRUCTURES AND FLOW LINES SHALL BE FREE FROM DIRT AND

23. TREES NOT MARKED FOR REMOVAL SHALL BE CONSIDERED AS DESIGNATED TO BE SAVED AND

SHALL BE PROTECTED, AS PER MUNICIPAL STANDARDS.

24. LIMB PRUNING SHALL BE PERFORMED UNDER THE SUPERVISION OF AN APPROVED LANDSCAPE

ARCHITECT, FORESTER, OR ARBORIST AND SHALL BE UNDERTAKEN IN A TIMELY FASHION SO AS 2. SIGNS: SIGNS SHALL BE CONSTRUCTED OF 0.080-INCH THICK FLAT ALUMINUM PANELS WITH NOT TO INTERFERE WITH CONSTRUCTION. ALL LIMBS. BRANCHES, AND OTHER DEBRIS RESULTING FROM THIS WORK SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR AT HIS/HER OWN EXPENSE. ALL CUTS OVER ONE (1) INCH IN DIAMETER SHALL BE PAINTED WITH AN APPROVED

25. WHERE SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER, EXISTING DRAINAGE STRUCTURES AND PIPE SHALL BE CLEANED OF DEBRIS AND PATCHED AS NECESSARY TO ASSURE INTEGRITY OF THE STRUCTURE. THIS WORK SHALL NOT BE PAID FOR SEPARATELY. BUT SHALL BE MERGED INTO THE CONTRACT UNIT PRICE EACH FOR STRUCTURES AND CONTRACT UNIT PRICE PER LINEAL FOOT FOR STORM SEWERS. WHICH SHALL BE PAYMENT IN FULL FOR CLEANING, PATCHING, REMOVAL, AND DISPOSAL OF DEBRIS AND DIRT, DRAINAGE STRUCTURES AND STORM SEWERS CONSTRUCTED AS PART OF THIS PROJECT SHALL BE MAINTAINED BY THE CONTRACTOR AT HIS EXPENSE. NO EXTRA PAYMENT WILL BE MADE FOR CLEANING STRUCTURES | OR STORM SEWERS CONSTRUCTED AS PART OF THIS PROJECT.

26. HYDRANTS SHALL NOT BE FLUSHED DIRECTLY ONTO THE ROAD SUBGRADES. WHENEVER POSSIBLE, HOSES SHALL BE USED TO DIRECT THE WATER INTO LOT AREAS OR THE STORM SEWER SYSTEM, IF AVAILABLE, DAMAGE TO THE ROAD SUBGRADE OR LOT GRADING DUE TO EXCESSIVE WATER SATURATION AND OR FROSION FROM HYDRANT FLUSHING, OR FROM LEAKS IN THE WATER DISTRIBUTION SYSTEM, WILL BE REPAIRED BY THE CONTRACTOR FLUSHING OR USING THE HYDRANT AT THE CONTRACTOR'S OWN EXPENSE. LEAKS IN THE WATER DISTRIBUTION SYSTEM SHALL BE THE RESPONSIBILITY OF THE WATER MAIN CONTRACTOR AND SHALL BE REPAIRED AT HIS EXPENSE.

27. AFTER THE STORM SEWER SYSTEM HAS BEEN CONSTRUCTED. THE CONTRACTOR SHALL PLACE EROSION CONTROL AT LOCATIONS INDICATED BY THE ENGINEER. THE PURPOSE OF THE EROSION CONTROL WILL BE TO MINIMIZE THE AMOUNT OF SILTATION THAT NORMALLY WOULD ENTER THE STORM SEWER SYSTEM FROM ADJACENT AND/OR UPSTREAM DRAINAGE AREAS.

28. THE TRENCHES FOR PIPE INSTALLATION SHALL BE KEPT DRY AT ALL TIMES DURING PIPE PLACEMENT, APPROPRIATE FACILITIES TO MAINTAIN THE DRY TRENCH SHALL BE PROVIDED BY THE CONTRACTOR. AND THE COST OF SUCH SHALL BE INCIDENTAL TO THE UNIT PRICE BID FOR THE ITEM. PLANS FOR THE SITE DEWATERING, IF EMPLOYED, SHALL BE SUBMITTED TO AND APPROVED BY THE ENGINEER PRIOR TO IMPLEMENTATION. NO ADDITIONAL COMPENSATION SHALL BE MADE FOR DEWATERING DURING CONSTRUCTION UNLESS APPROVED IN WRITING BY THE

29. EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH IDEM REGULATIONS AND STANDARDS FOR SOIL EROSION AND SEDIMENTATION CONTROL AND SHALL BE MAINTAINED BY THE CONTRACTOR AND REMAIN IN PLACE UNTIL A SUITABLE GROWTH OF GRASS, ACCEPTABLE TO THE ENGINEER, HAS DEVELOPED.

PAVING NOTES

PAVING WORK INCLUDES FINAL SUBGRADE SHAPING, PREPARATION, AND COMPACTION; PLACEMENT OF SUBBASE OR BASE COURSE MATERIALS; BITUMINOUS INTERMEDIATE AND/OR SURFACE COURSES; FORMING, FINISHING, AND CURING CONCRETE PAVEMENT, CURBS, AND

WALKS; AND FINAL CLEAN-UP AND ALL RELATED WORK.

SUBGRADE PREPARATION

EARTHWORK FOR PROPOSED PAVEMENT SUBGRADE SHALL BE FINISHED TO WITHIN 0.1 FOOT, PLUS OR MINUS, OF PLAN ELEVATION, THE CONTRACTOR SHALL SATISFY HIMSELF THAT THI SUBGRADE HAS BEEN PROPERLY PREPARED AND THAT THE FINISH TOP SUBGRADE FLEVATION HAS BEEN GRADED WITHIN TOLERANCES ALLOWED IN THESE SPECIFICATIONS. UNLESS THE CONTRACTOR ADVISES THE ENGINEER IN WRITING PRIOR TO FINE GRADING FOR BASE COURSE CONSTRUCTION. IT IS UNDERSTOOD THAT HE/SHE HAS APPROVED AND ACCEPTS THE

RESPONSIBILITY FOR THE SUBGRADE. AFTER STRIPPING TO THE PROPOSED SUBGRADE LEVEL, THE BUILDING AND PARKING AREA

SHOULD BE PROOF-ROLLED WITH A TANDEM AXLE DUMP TRUCK OR SIMILAR HEAVY RUBBER TIRED VEHICLE TYPICALLY WITH AN AXIAL LOAD GREATER THAN NINE (9) TONS OR MEETING SPECIFICATIONS OUTLINED IN INDOT CMS ITEM 204 FOR ROADWAY SUBGRADE COMPACTION AND PROOF-ROLLING.

2.3. MAXIMUM DEFLECTION ALLOWED IN ISOLATED AREAS MAY BE ONE (1) INCH IF NO DEFLECTION OCCURS OVER THE MAJORITY OF THE AREA.

PRIOR TO THE CONSTRUCTION OF THE CURB AND GUTTER AND THE PLACEMENT OF THE BASE MATERIAL. THE PAVEMENT AREA SHALL BE FINE-GRADED TO WITHIN 0.04 FEET (1/2 INCH) OF FINAL SUBGRADE FLEVATION, TO A POINT TWO (2) FEET BEYOND THE BACK OF THE CURB. SO AS TO ENSURE THE PROPER THICKNESS OF PAVEMENT COURSES. NO CLAIMS FOR EXCESS QUANTITY OF BASE MATERIALS DUE TO IMPROPER SUBGRADE PREPARATION WILL BE

PRIOR TO PLACEMENT OF THE BASE COURSE, THE SUBGRADE SHALL BE APPROVED BY THE TESTING ENGINEER.

ALL EXTERIOR CONCRETE SHALL BE PORTLAND CEMENT CONCRETE CLASS S1 OR PV. CONCRETE SHALL BE A MINIMUM OF SIX (6) BAG MIX AND SHALL DEVELOP A MINIMUM OF 4,000 PSI COMPRESSIVE STRENGTH AT TWENTY-EIGHT (28) DAYS. ALL CONCRETE SHALL BE BROOM-FINISHED PERPENDICULAR TO THE DIRECTION OF TRAVEL.

CONCRETE CURB AND/OR COMBINATION CURB AND GUTTER SHALL BE OF THE TYPE SHOWN ON THE PLANS. THE CONTRACTOR IS CAUTIONED TO REFER TO THE CONSTRUCTION STANDARDS AND THE PAVEMENT CROSS SECTION TO DETERMINE THE GUTTER FLAG THICKNESS. AND THE AGGREGATE BASE COURSE THICKNESS BENEATH THE CURB AND GUTTER. PRE-MOLDED FIRER EXPANSION JOINTS, WITH TWO 3/4-INCH BY 18-INCH EPOXY-COATED STEEL DOWEL BARS, SHALL BE GREASED AND FITTED WITH METAL EXPANSION TUBES. SAWED OR FORMED CONTRACTION JOINTS SHALL BE PROVIDED AT NO GREATER THAN TEN TO TWENTY-FIVE FOOT INTERVALS BETWEEN EXPANSION JOINTS. NO HONEY-COMBING OF THE CURB AND GUTTER WILL BE ACCEPTED.

CURBS SHALL BE DEPRESSED AT LOCATIONS WHERE PUBLIC WALKS INTERSECT CURB LINES AND OTHER LOCATIONS, AS DIRECTED, FOR THE PURPOSE OF PROVIDING ACCESSIBILITY. 3.4. THE CURBS SHALL BE BACKFILLED AFTER THEIR CONSTRUCTION AND PRIOR TO THE

CONCRETE SIDEWALK SHALL BE IN ACCORDANCE WITH THE ABOVE AND THE PLANS. PROVIDE SCORED JOINTS AT MAXIMUM 6-FOOT INTERVALS AND 1/2-INCH PRE-MOLDED FIBER EXPANSION JOINTS AT 50-FOOT MAXIMUM INTERVALS AND ADJACENT TO CONCRETE CURBS, DRIVEWAYS, FOUNDATIONS, AND OTHER STRUCTURES.

CONCRETE DRIVEWAY APRONS SHALL BE IN ACCORDANCE WITH THE ABOVE AND THE PLANS. PROVIDE 6-INCH BY 6-INCH NO. 6 WELDED WIRE MESH IN ALL DRIVEWAYS. PROVIDE 1/2-INCH PRE-MOLDED FIBER EXPANSION JOINT ADJACENT TO CURBS AND CONCRETE SIDEWALKS. PROVIDE SAWED OR FORMED CONTRACTIONS JOINT AT MID-POINT AND 15-FOOT

STANDARD REINFORCED CONCRETE PAVEMENT SHALL BE IN ACCORDANCE WITH THE ABOVE AND THE PLANS. SAWED OR FORMED CONTRACTION EXPANSION JOINTS SHALL BE AS SHOWN

3.8. CONCRETE CURING AND PROTECTION SHALL BE PER INDOT STANDARDS. TWO (2) COATS OF INDOT APPROVED CURING AGENT SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES.

3.9. THE COST OF AGGREGATE BASE OR SUBBASE UNDER CONCRETE WORK SHALL BE INCLUDED IN THE COST OF THE RESPECTIVE CONCRETE ITEM.

FLEXIBLE PAVEMENT

PLACEMENT OF THE BASE COURSE.

THE PAVEMENT MATERIALS FOR BITUMINOUS STREETS. PARKING LOTS. AND DRIVE AISLES SHALL BE AS DETAILED ON THE PLANS. UNLESS OTHERWISE SHOWN ON THE PLANS. THE FLEXIBLE PAVEMENTS SHALL CONSIST OF AGGREGATE BASE, ASPHALT INTERMEDIATE COURSE TYPE 2. AND ASPHALT SURFACE COURSE TYPE 1. OF THE THICKNESS AND MATERIALS SPECIFIED ON THE PLANS. THICKNESSES SPECIFIED SHALL BE CONSIDERED TO BE THE MINIMUM COMPACTED THICKNESS.

4.2. ALL TRAFFIC SHALL BE KEPT OFF THE COMPLETED AGGREGATE BASE UNTIL THE INTERMEDIATI COURSE IS LAID.

4.3. PRIOR TO PLACEMENT OF THE SURFACE COURSE THE INTERMEDIATE COURSE SHALL BE CLEANED AND TACK-COATED IF DUSTY OR DIRTY. ALL DAMAGED AREAS IN THE INTERMEDIATE COURSE, BASE, OR CURB SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER PRIOR TO LAYING THE SURFACE COURSE. THE CONTRACTOR SHALL PROVIDE WHATEVER FOUIPMENT. AND STAFF NECESSARY. INCLUDING THE USE OF POWER BROOMS IF REQUIRED BY THE OWNER TO PREPARE THE PAVEMENT FOR APPLICATION OF THE SURFACE COURSE. THE TACK COAT SHALL BE UNIFORMLY APPLIED TO THE BINDER COURSE AT A RATE OF 0.05 TO 0.10 GALLONS PER SQUARE YARD. TACK COAT SHALL BE AS PER INDOT STANDARDS.

4.4. SEAMS IN SURFACE AND BASE COURSES SHALL BE STAGGERED A MINIMUM OF 6 INCHES. TESTING AND FINAL ACCEPTANCE.

THE CONTRACTOR SHALL FOLLOW THE QUALITY CONTROL TESTING PROGRAM FOR CONCRETE AND PAVEMENT MATERIALS ESTABLISHED BY THE ENGINEER.

PRIOR TO PLACEMENT OF THE BITUMINOUS CONCRETE SURFACE COURSE. THE CONTRACTOR. WHEN REQUIRED BY THE MUNICIPALITY, SHALL OBTAIN SPECIMENS OF THE INTERMEDIATE COURSE WITH A CORE DRILL WHERE DIRECTED, FOR THE PURPOSE OF THICKNESS

WHEN REQUIRED BY THE MUNICIPALITY. THE CONTRACTOR SHALL OBTAIN SPECIMENS OF THE FULL DEPTH BITUMINOUS CONCRETE PAVEMENT STRUCTURE WITH A CORE DRILL WHERE DIRECTED IN ORDER TO CONFIRM THE PLAN THICKNESS. DEFICIENCIES IN THICKNESS SHALL BE ADJUSTED FOR BY THE METHOD REQUIRED BY INDOT STANDARDS.

5.4. FINAL ACCEPTANCE OF THE TOTAL PAVEMENT INSTALLATION SHALL BE SUBJECT TO THE TESTING AND CHECKING REQUIREMENTS CITED ABOVE.

ALL MATERIAL AND CONSTRUCTION SHALL CONFORM TO THE MUNICIPAL CODE. WHEN CONFLICTS ARISE BETWEEN MUNICIPAL CODE, AND GENERAL NOTES, THE MORE STRINGENT SHALL TAKE PRECEDENCE.

SIGNING AND PAVEMENT MARKING NOTES

ALL SIGNING AND PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE INDIANA DEPARTMENT OF TRANSPORTATION (INDOT)

REFLECTORIZED LEGEND ON THE FACE. LEGEND SHALL BE IN ACCORDANCE WITH THE MUTCD. POSTS: SIGN POSTS SHALL BE NEW GALVANIZED STEEL PIPE IN ACCORDANCE WITH ASTM A 53 OR ASTM F 1083. USE STANDARD WEIGHT, SCHEDULE 40 PIPE PER THE INDOT STANDARDS.

SIGNS AND POSTS SHALL BE INSTALLED IN ACCORDANCE WITH INDOT STANDARDS. PAVEMENT MARKINGS: ALL PAVEMENT MARKINGS IN THE ROADWAY LIMITS, SUCH AS STOP LINES, CENTERLINES, CROSSWALKS, AND DIRECTIONAL ARROWS, SHALL BE REFLECTORIZED THERMOPLASTIC HOT ROLLED INTO PAVEMENT OR PAINT PER INDOT STANDARDS.

PAVEMENT MARKINGS ON BIKE PATHS, PARKING LOT STALLS, AND SIMILAR "LOW-WEAR" APPLICATIONS, SHALL BE PAINT IN ACCORDANCE WITH INDOT STANDARDS. COLOR, WIDTH, STYLE, AND SIZE OF ALL MARKINGS SHALL BE IN ACCORDANCE WITH THE MUTCD

THERMOPLASTIC MARKINGS SHALL BE INSTALLED WHEN THE PAVEMENT TEMPERATURE IS 55 DEGREES FAHRENHEIT AND RISING. PAINT MARKINGS MAY BE INSTALLED WHEN THE AIR TEMPERATURE IS 50 DEGREES FAHRENHEIT AND RISING.

EARTHWORK NOTES

1.1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE SOIL AND GROUNDWATER CONDITIONS AT THE SITE.

2. ANY QUANTITIES IN THE BID PROPOSAL ARE INTENDED AS A GUIDE FOR THE CONTRACTOR'S USE IN DETERMINING THE SCOPE OF THE COMPLETED PROJECT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ALL MATERIAL QUANTITIES AND APPRISE HIMSELF/HERSELF OF ALL SITE CONDITIONS. THE CONTRACT PRICE SUBMITTED BY THE CONTRACTOR SHALL BE CONSIDERED AS LUMP SUM FOR THE COMPLETE PROJECT. NO CLAIMS FOR EXTRA WORK WILL BE RECOGNIZED.

1.3. THE CONTRACTOR WILL NOTE THAT THE ELEVATIONS SHOWN ON THE CONSTRUCTION PLANS ARI FINISHED GRADE AND SUBGRADE ELEVATIONS (AS NOTED) AND THAT PAVEMENT THICKNESS, TOPSOIL, ETC., MUST BE ACCOUNTED FOR.

4. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE DURING CONSTRUCTION AND PREVENT STORMWATER FROM RUNNING INTO OR STANDING IN EXCAVATED AREAS. THE FAILURE TO PROVIDE PROPER DRAINAGE WILL NEGATE ANY POSSIBLE ADDED COMPENSATION REQUESTED DUE TO DELAYS OR UNSUITABLE MATERIALS CREATED AS A RESULT THEREOF. FINAL GRADES SHALL BE PROTECTED AGAINST DAMAGE FROM EROSION, SEDIMENTATION, AND TRAFFIC.

.5. PLANS FOR THE SITE DEWATERING, IF EMPLOYED, SHALL BE SUBMITTED AND APPROVED PRIOR TO IMPLEMENTATION. NO ADDITIONAL COMPENSATION SHALL BE MADE FOR DEWATERING DURING

THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION OF THE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES. THE INITIAL ESTABLISHMENT OF EROSION CONTROL PROCEDURES AND THE PLACEMENT OF SILT AND FILTER FENCING, ETC., TO PROTECT ADJACENT PROPERTY, ETC., SHALL OCCUR BEFORE GRADING BEGINS.

PRIOR TO COMMENCEMENT OF GRADING ACTIVITIES, THE CONTRACTOR SHALL ERECT A CONSTRUCTION FENCE AROUND ANY TREE DESIGNATED TO BE PRESERVED. SAID FENCE SHALL BE PLACED IN A CIRCLE CENTERED AROUND THE TREE, THE DIAMETER OF WHICH SHALL BE SUCH THAT THE ENTIRE DRIP ZONE (EXTENT OF FURTHEST EXTENDING BRANCHES) SHALL BE WITHIN THE FENCE LIMITS. THE EXISTING GRADE WITHIN THE FENCED AREA SHALL NOT BE DISTURBED.

TOPSOIL EXCAVATION INCLUDES:

. EARTH EXCAVATION INCLUDES:

EXCAVATION OF TOPSOIL AND OTHER STRUCTURALLY UNSUITABLE MATERIALS WITHIN THOSE AREAS THAT WILL REQUIRE EARTH EXCAVATION OR COMPACTED EARTH FILL MATERIAL. EXISTING VEGETATION SHALL BE REMOVED PRIOR TO STRIPPING TOPSOIL OR FILLING AREAS.

2.2. PLACEMENT OF EXCAVATED MATERIAL IN OWNER-DESIGNATED AREAS FOR FUTURE USE WITHIN AREAS TO BE LANDSCAPED AND THOSE AREAS NOT REQUIRING STRUCTURAL FILL MATERIAL. PROVIDE NECESSARY EROSION CONTROL MEASURES FOR STOCKPILE.

3. TOPSOIL STOCKPILED FOR RESPREAD SHALL BE FREE OF CLAY AND SHALL NOT CONTAIN ANY OF THE TRANSITIONAL MATERIAL BETWEEN THE TOPSOIL AND CLAY. THE TRANSITIONAL MATERIAL SHALL BE USED IN NON-STRUCTURAL FILL AREAS OR DISPOSED OF OFF-SITE.

.4. TOPSOIL RESPREAD SHALL INCLUDE HAULING AND SPREADING OF TOPSOIL DIRECTLY OVER AREAS TO BE LANDSCAPED WHERE SHOWN ON THE PLANS OR AS DIRECTED BY THE OWNER.

3.1. EXCAVATION OF SUBSURFACE MATERIALS WHICH ARE SUITABLE FOR USE AS STRUCTURAL FILL. THE EXCAVATION SHALL BE TO WITHIN A TOLERANCE OF 0.1 FEET OF THE PLAN SUBGRADE FLEVATIONS WHILE MAINTAINING PROPER DRAINAGE. THE TOLERANCE WITHIN PAVEMENT AREAS. SHALL BE SUCH THAT THE EARTH MATERIALS SHALL "BALANCE" DURING THE FINE GRADING

3.2. PLACEMENT OF SUITABLE MATERIALS SHALL BE WITHIN THOSE AREAS REQUIRING STRUCTURAL FILL IN ORDER TO ACHIEVE THE PLAN SUBGRADE ELEVATIONS TO WITHIN A TOLERANCE OF 0.1 FEET. THE FILL MATERIALS SHALL BE PLACED IN LOOSE LIFTS THAT SHALL NOT EXCEED EIGHT (8) INCHES IN THICKNESS, AND THE WATER CONTENT SHALL BE ADJUSTED IN ORDER TO ACHIEVE REQUIRED COMPACTION.

3. STRUCTURAL FILL MATERIAL MAY BE PLACED WITHIN THOSE PORTIONS OF THE SITE NOT REQUIRING STRUCTURAL FILL. WITHIN SIX (6) INCHES OF THE PLAN FINISHED GRADE ELEVATION IN AREAS REQUIRING STRUCTURAL FILL, HOWEVER, THIS MATERIAL SHALL NOT BE PLACED OVER TOPSOIL OR OTHER UNSUITABLE MATERIALS UNLESS SPECIFICALLY DIRECTED BY A SOILS ENGINEER WITH THE CONCURRENCE OF THE OWNER.

. COMPACTION OF SUITABLE MATERIALS SHALL BE TO AT LEAST 9.3% OF THE MODIFIED PROCTOR DRY DENSITY WITHIN PROPOSED PAVEMENT AREAS, SIDEWALK, ETC. COMPACTION SHALL BE AT LEAST 95% OF THE MODIFIED PROCTOR WITHIN PROPOSED BUILDING PAD AREAS.

UNSUITABLE MATERIAL: UNSUITABLE MATERIALS SHALL BE CONSIDERED MATERIAL THAT IS NOT SUITABLE FOR THE SUPPORT OF PAVEMENT AND BUILDING CONSTRUCTION. AND IS ENCOUNTERED BELOW NORMAL TOPSOIL DEPTHS AND THE PROPOSED SUBGRADE FLEVATION. THE DECISION TO REMOVE SAID MATERIAL AND TO WHAT EXTENT SHALL BE MADE BY THE GEOTECHNICAL ENGINEER OR SOILS TESTING AGENCY WITH THE CONCURRENCE OF THE OWNER. 5. MISCELLANEOUS. THE CONTRACTOR SHALL:

5.1. SPREAD AND COMPACT UNIFORMLY TO THE DEGREE SPECIFIED ALL EXCESS TRENCH SPOIL AFTER COMPLETION OF THE UNDERGROUND IMPROVEMENTS.

5.2. SCARIFY, DISC, AERATE, AND COMPACT, TO THE DEGREE SPECIFIED, THE UPPER TWELVE (12) INCHES OF THE SUITABLE SUBGRADE MATERIAL IN ALL AREAS THAT MAY BE SOFT DUE TO EXCESS MOISTURE CONTENT. THIS APPLIES TO CUT AREAS AS WELL AS FILL AREAS.

.3. PROVIDE WATER TO ADD TO DRY MATERIAL IN ORDER TO ADJUST THE MOISTURE CONTENT FOR THE PURPOSE OF ACHIEVING THE SPECIFIED COMPACTION. .4. BACKFILL THE CURB AND GUTTER AFTER ITS CONSTRUCTION AND PRIOR TO THE PLACEMENT (

TESTING AND FINAL ACCEPTANCE 6.1. THE CONTRACTOR SHALL PROVIDE AS A MINIMUM A FULLY LOADED SIX-WHEEL TANDEM AXLE TRUCK FOR PROOF ROLLING THE PAVEMENT SUBGRADE PRIOR TO THE PLACEMENT OF THE CURB AND GUTTER AND THE BASE MATERIAL. THIS SHALL BE WITNESSED BY THE ENGINEER OR SOILS TESTING AGENCY AND THE OWNER. (SEE PAVING SPECIFICATION.)

6.2. ANY UNSUITABLE AREA ENCOUNTERED AS A RESULT OF PROOF ROLLING SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL OR OTHERWISE CORRECTED AND APPROVED BY THE ENGINEER OR SOILS TESTING AGENCY.

STORM SEWER NOTES

GROUND/STORM SEWER SYSTEM.

THE BASE COURSE MATERIAL.

STORM SEWER PIPE: ALL STORM SEWER PIPE SHALL BE RCP, UNLESS OTHERWISE NOTED ON THE PLANS, IN ACCORDANCE WITH THE FOLLOWING:

RCP REINFORCED CONCRETE PIPE (ASTM C-76) 12"-66" < 12" PVC SDR-35, ASTM D-3034 REFER TO PLANS FOR PIPE SIZES.

FOR PIPE SIZES 12" TO 54" WITH COVER BETWEEN 1'-3', USE SEWER CLASS III CONCRETE PIPE. FOR COVER GREATER THAN 3' BUT LESS THAN 9', USE CLASS II CONCRETE PIPE. FOR COVER BETWEEN 9'-13', USE CLASS III CONCRETE PIPE. FOR PIPE SIZES GREATER THAN 54" WITH COVER BETWEEN 1'-9', USE CLASS II CONCRETE PIPE. FOR COVER GREATER THAN 9' BUT LESS THAN 13', USE CLASS III CONCRETE PIPE.

BAND-SEAL OR SIMILAR COUPLING SHALL BE USED WHEN JOINING STORM SEWER PIPES OF DISSIMILAR MATERIALS.

ALL FOOTING DRAIN DISCHARGE PIPES AND DOWN SPOUTS SHALL DISCHARGE TO THE

CONSTRUCTION: ALL STORM SEWERS ARE TO BE CONSTRUCTED USING A LASER INSTRUMENT TO MAINTAIN LINE AND GRADE. COVER: THE CONTRACTOR SHALL MAINTAIN AT LEAST TWO (2) FEET OF COVER OVER THE TOP (

SHALLOW PIPES AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL MOUND OVER ANY PIPES THAT HAVE LESS THAN TWO (2) FEET OF COVER DURING CONSTRUCTION UNTIL THE AREA IS FINAL GRADED OR PAVED. STRUCTURES: MANHOLE, CATCH BASIN, AND INLET BOTTOMS SHALL BE PRECAST CONCRETE SECTIONAL UNITS OR MONOLITHIC CONCRETE. MANHOLES AND CATCH BASINS SHALL BE A

(12) INCHES OF ADJUSTING RINGS SHALL BE USED. A CONCRETE BENCH TO DIRECT FLOWS SHALL BE CONSTRUCTED IN THE BOTTOM OF ALL INLETS AND MANHOLES.

CLEANING: THE STORM SEWER SYSTEM SHALL BE THOROUGHLY CLEANED PRIOR TO FINAL INSPECTION AND TESTING.

MINIMUM OF FOUR (4) FEET IN DIAMETER UNLESS OTHERWISE SPECIFIED ON THE PLANS.

STRUCTURE JOINTS SHALL BE SEALED WITH "O" RING OR BUTYL ROPE. A MAXIMUM OF TWELVE

THE FRAME, GRATE, AND/OR CLOSED LID SHALL BE CAST IRON OF THE STYLE SHOWN ON THE

O. MANHOLES, CATCH BASINS, INLETS, FRAMES, GRATES, AND OTHER STRUCTURES SHALL BE CONSTRUCTED OF THE TYPE, STYLE, AND SIZE AS SET FORTH WITH THE ORDINANCES AND STANDARDS OF THE MUNICIPALITY.

ALL MATERIAL AND CONSTRUCTION SHALL CONFORM TO THE MUNICIPAL CODE. WHEN CONFLICTS ARISE BETWEEN MUNICIPAL CODE AND GENERAL NOTES, THE MORE STRINGENT SHALL TAKE PRECEDENCE.

SANITARY SEWER NOTES

ALL UNSUITABLE MATERIALS SHALL BE REMOVED BELOW THE PROPOSED SANITARY SEWER AND REPLACED WITH COMPACTED CRUSHED GRAVEL OR STONE, AS PER INDOT STANDARDS.

95% OF STD. PROCTOR MAXIMUM DAY DENSITY. ALL SANITARY SEWERS ARE TO BE CONSTRUCTED USING A LASER INSTRUMENT TO MAINTAIN LINE

AND GRADE.

CONNECTIONS TO EXISTING SANITARY SEWER SYSTEM SHALL NOT BE DONE UNTIL AUTHORIZED BY CONTINENTAL UNITED STATES. THE MUNICIPALITY.

WATERMAINS SHALL BE SEPARATED FROM SANITARY SEWERS AND STORM SEWERS IN ACCORDANCE WITH INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT REQUIREMENTS, AS SPECIFIED IN THE STANDARDS FOR WATER AND SEWER CONSTRUCTION IN INDIANA.

NO WATER LINE SHALL BE PLACED IN THE SAME TRENCH AS A SEWER LINE, EXCEPT UNDER SPECIAL CIRCUMSTANCES AND THEN ONLY UNDER THE FOLLOWING RULES:

6.1. IF NECESSARY PERMISSION SHALL BE OBTAINED FROM THE MUNICIPALITY IN WRITING PRIOR TO BEGINNING CONSTRUCTION.

6.2. THE BOTTOM OF A WATER LINE SHALL BE INSTALLED ON A SHELF A MINIMUM OF 18 INCHES ABOVE THE TOP OF THE SEWER AND 18 INCHES HORIZONTALLY AWAY FROM THE EDGE OF ALL PIPE CONNECTION OPENINGS SHALL BE PRECAST WITH RESILIENT RUBBER WATER-TIGHT

SLEEVES. THE BOTTOM OF THE MANHOLE SHALL HAVE A CONCRETE BENCH POURED TO FACILITATE SMOOTH FLOWS. FRAMES AND LIDS: ALL SANITARY SEWER MANHOLE FRAMES AND LIDS SHALL BE PER DETAIL SHEET, UNLESS OTHERWISE NOTED ON THE PLANS AND DETAILS. THE LIDS SHALL HAVE RECESSED (CONCEALED) PICK HOLE AND BE SELF—SEALING WITH AN "O" RING GASKET. THE JOINTS BETWEEN 5.

THE FRAME AND CONCRETE SECTION SHALL BE SEALED WITH A BUTYL ROPE A MAXIMUM OF TWELVE (12) INCHES OF CONCRETE-ADJUSTING RINGS SHALL BE USED TO ADJUST

FRAME ELEVATIONS. RINGS SHALL BE SEALED TOGETHER WITH BUTYL ROPE.

D. CLEANING: ALL MANHOLES AND PIPES SHALL BE THOROUGHLY CLEANED OF DIRT AND DEBRIS, AND ALL VISIBLE LEAKAGE ELIMINATED, BEFORE FINAL INSPECTION AND ACCEPTANCE. TESTING: DEFLECTION, AIR, AND LEAKAGE TESTING WILL BE REQUIRED. THE PROCEDURE AND

ALLOWABLE TESTING LIMITS SHALL BE IN ACCORDANCE WITH THE TEN STATE STANDARDS.

. TESTING THE ALIGNMENT/STRAIGHTNESS SHALL BE IN ACCORDANCE WITH MUNICIPAL STANDARDS. . TELEVISING: IF REQUIRED BY THE MUNICIPALITY, ALL SANITARY SEWERS SHALL BE TELEVISED, AND A COPY OF THE TAPE AND A WRITTEN REPORT SHALL BE SUBMITTED AND REVIEWED BY THE MUNICIPALITY BEFORE FINAL ACCEPTANCE. THE REPORT SHALL INCLUDE STUB LOCATION AS WELL AS A DESCRIPTION OF ALL DEFECTS, WATER LEVEL, LEAKS, AND LENGTHS, IDENTIFY MANHOLE TO

ORDER OF WRITTEN REPORT SHALL BE THE SAME AS THE VIDEOTAPES. . TEST RESULTS: IF THE SANITARY SEWER INSTALLATION FAILS TO MEET THE TEST REQUIREMENTS SPECIFIED, THE CONTRACTOR SHALL DETERMINE THE CAUSE OR CAUSES OF THE DEFECT AND REPAIR. OR REPLACE ALL MATERIALS AND WORKMANSHIP, AS MAY BE NECESSARY TO COMPLY WITH THE TEST REQUIREMENTS.

MANHOLE BOTH VERBALLY AND ON-SCREEN USING MANHOLE NUMBERS FROM APPROVED PLANS.

. CERTIFICATION: CONTRACTOR SHALL SUBMIT CERTIFIED COPIES OF ALL REPORTS OF TESTS CONDUCTED BY AN INDEPENDENT LABORATORY BEFORE INSTALLATION OF PVC PLASTIC PIPE ESTS SHALL BE CONDUCTED IN ACCORDANCE WITH STANDARD METHOD OF TEST FOR "EXTERNAL LOADING PROPERTIES OF PLASTIC PIPE BY PARALLEL PLATE LOADING." ASTM STANDARDS D-2241, AS APPROPRIATE FOR THE PIPE. TO BE USED. TESTS SHALL ALSO BE CONDUCTED TO DEMONSTRATE JOINT PERFORMANCE AT FIVE (5) PERCENT MAXIMUM DIAMETRIC DEFLECTION OF

. IF CONFLICT ARISES BETWEEN MUNICIPAL STANDARDS AND SANITARY SEWER NOTES, THE MORE STRINGENT SHALL APPLY.

. ALL SANITARY SEWER LINES SHALL BE PVC MEETING ASTM D-3034 STANDARDS AND JOINTS MEETING ASTM D-3212. ALL SANITARY MANHOLES TO BE CONCRETE AND MEET MANHOLE DESIGN SPECIFICATION OF ASTM C-478 AND JOINT SPECIFICATIONS OF ASTM C-443. SANITARY SEWER LINES THAT ARE PROPOSED AT A DEPTH 15 FEET OR GREATER SHALL BE DUCTILE IRON CLASS

DEMOLITION NOTES

THE INTENT OF THE DEMOLITION PLAN IS TO DEPICT EXISTING FEATURES THAT ENCUMBER THE PROPOSED CONSTRUCTION AREA AND ARE SCHEDULED FOR REMOVAL. SOME INCIDENTAL ITEMS MAY HAVE BEEN INADVERTENTLY OMITTED FROM THE PLAN. THE CONTRACTOR IS ENCOURAGED TO THOROUGHLY INSPECT THE SITE AS WELL AS REVIEW THE PLANS AND SPECIFICATIONS PRIOR TO SUBMITTING PRICING. CONTRACTOR WILL NOT RECEIVE ADDITIONAL COMPENSATION FOR INCIDENTAL | ITEMS NOT SHOWN ON THE DEMOLITION PLAN.

THE LOCATIONS OF EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE | 17.2.2. THE WATERMAIN INVERT IS AT LEAST EIGHTEEN (18) INCHES ABOVE THE CROWN OF THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. PRIOR TO COMMENCING ANY DEMOLITION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES FOR ONSITE LOCATIONS OF EXISTING UTILITIES AND FIELD VERIFY ALL UNDERGROUND UTILITIES.

THE CONTRACTOR SHALL MAINTAIN ALL UTILITY SERVICES TO THE EXISTING BUILDING AT ALL TIMES. UTILITY SERVICES SHALL NOT BE INTERRUPTED WITHOUT APPROVAL FROM THE CONSTRUCTION MANAGER.

CONTRACTOR IS REQUIRED TO OBTAIN ALL NECESSARY DEMOLITION PERMITS. THE CONTINUOUS ACCESS SHALL BE MAINTAINED FOR THE TRUCKS AT ALL TIMES DURING DEMOLITION OF THE EXISTING FACILITIES. CONTRACTOR MAY LIMIT SAW-CUT AND PAVEMENT REMOVAL TO ONLY THOSE AREAS WHERE IT IS

REQUIRED AS SHOWN ON THESE CONSTRUCTION PLANS BUT IF ANY DAMAGE IS INCURRED ON ANY OF THE SURROUNDING PAVEMENT, ETC., THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS | 18.2. REMOVAL AND REPAIR. THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES PRIOR TO THE REMOVAL AND/OR RELOCATION OF UTILITIES OR PRIOR TO ANY FURTHER DEMOLITION. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY CONCERNING PORTIONS OF WORK

BE PAID TO THE UTILITY COMPANY FOR THEIR SERVICES. THE CONTRACTOR IS RESPONSIBLE FOR PAYING ALL FEES AND CHARGES. THE CONTRACTOR SHALL USE DUE CARE IN HAULING DEBRIS FROM SITE TO ENSURE THE SAFETY

WHICH MAY BE PERFORMED BY THE UTILITY COMPANY'S FORCES AND ANY FEES WHICH ARE TO

. DAMAGE TO ALL EXISTING CONDITIONS TO REMAIN WILL BE REPLACED AT CONTRACTOR'S EXPENSE. O. CONTRACTOR SHALL LIMIT ALL DEMOLITION ACTIVITIES TO THOSE AREAS DELINEATED ON THE CONSTRUCTION DRAWINGS UNLESS OTHERWISE DIRECTED BY THE CONSTRUCTION MANAGER.

CONTRACTOR IS RESPONSIBLE FOR CONTROLLING AIRBORNE DUST AND POLLUTANTS BY USING WATER SPRINKLING OR OTHER SUITABLE MEANS OF CONTROL. 2. CONTRACTOR TO USE CARE IN HANDLING DEBRIS FROM SITE TO ENSURE THE SAFETY OF THE PUBLIC. HAUL ROUTE TO BE CLOSELY MONITORED FOR DEBRIS OR MATERIALS TRACKED ONTO ADJOINING ROADWAYS, ETC. ROADWAYS AND WALKWAYS TO BE CLEARED DAILY OR AS

NECESSARY TO MAINTAIN PUBLIC SAFETY. 3. DEWATERING SHOULD BE ANTICIPATED AND INCLUDED. DEWATERING SHALL BE DONE IN

ACCORDANCE WITH LOCAL AND REGIONAL REQUIREMENTS. **EROSION CONTROL NOTES**

CONSTRUCTION ENTRANCE SHALL BE LOCATED SO AS TO PROVIDE THE LEAST AMOUNT OF DISTURBANCE TO THE FLOW OF TRAFFIC IN AND OUT OF THE SITE. ADDITIONALLY, CONSTRUCTION ENTRANCE SHALL BE LOCATED TO COINCIDE WITH THE PHASING OF THE PAVEMENT REPLACEMENT. | 20.2.

POST CONSTRUCTION STORM WATER POLLUTION CONTROL MEASURES INCLUDE STABILIZATION BY

PERMANENT PAVING, DRAINAGE SYSTEM STRUCTURE, OR LANDSCAPING. TEMPORARY AND PERMANENT STABILIZATION PRACTICES AND BMP'S SHALL BE INSTALLED AT THE EARLIEST POSSIBLE TIME DURING THE CONSTRUCTION SEQUENCE. AS AN EXAMPLE. PERIMETER SILT FENCE SHALL BE INSTALLED BEFORE COMMENCEMENT OF ANY GRADING ACTIVITIES. OTHER BMP'S SHALL BE INSTALLED AS SOON AS PRACTICABLE AND SHALL BE MAINTAINED UNTIL FINAL SITE STABILIZATION IS ATTAINED. CONTRACTOR SHALL ALSO REFERENCE CIVIL AND LANDSCAPE PLANS SINCE PERMANENT STABILIZATION IS PROVIDED BY LANDSCAPING, THE BUILDING(S), AND

BMP'S HAVE BEEN LOCATED AS INDICATED IN THESE PLANS IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES IN ORDER TO MINIMIZE SEDIMENT TRANSFER. FOR EXAMPLE: SILT FENCES LOCATED AT TOE OF SLOPE AND INLET PROTECTION FOR INLETS RECEIVING SEDIMENT FROM SITE RUN-OFF

WATERMAIN NOTES

ALL WATER LINE MATERIALS AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE CURRENT RULES AND REGULATIONS OF THE MUNICIPALITY UTILITIES DEPARTMENT.

ALL TRENCHES BENEATH PROPOSED OR EXISTING UTILITIES, PAVEMENTS, ROADWAYS, SIDEWALKS, AND FOR A DISTANCE OF THREE (3) FEET ON EITHER SIDE OF SAME, AND/OR WHERE SHOWN ON THE PLANS, SHALL BE BACKFILLED WITH MATERIAL THAT HAS BEEN TREATED AND COMPACTED TO COUPLING WITH TWO RUBBER GASKETS SHALL BE FURNISHED WITH EACH LENGTH OF PIPE. IT SHALL BE THE SAME MATERIAL AND BY THE SAME MANUFACTURER AS THE PIPE AND CONFORM TO ASTM D3139. RUBBER GASKETS SHALL CONFORM TO ASTM F477.

> TESTING OF THE PIPE AND COUPLINGS SHALL BE MADE IN ACCORDANCE WITH AWWA C900. REGARDLESS OF THE PLACE OF MANUFACTURE, ALL PIPE SHALL BE TESTED WITHIN THE

PRESSURE RATING: THE PIPE SHALL BE DR 14 FOR FIRE PROTECTION MAINS AND DR 18 FOR WATER MAINS.

JOINTS: JOINTS SHALL BE BELL END OR COUPLING PUSH-ON TYPE. THE PUSH-ON JOINT AND JOINT COMPONENTS SHALL MEET THE REQUIREMENTS FOR ASTM D-3139. JOINT FOR PLASTIC PRESSURE PIPE, USING FLEXIBLE ELASTOMERIC SEALS. THE JOINT SHALL BE DESIGNED SO AS TO PROVIDE FOR THE THERMAL EXPANSION AND CONTRACTION EXPERIENCED WITH A TOTAL TEMPERATURE CHANGE OF 75 DEGREES F IN EACH JOINT OF PIPE. THE LUBRICANT SHALL HAVE NO DETERIORATING EFFECTS ON THE GASKET OR THE PIPE. GASKETS SHALL MEET ALL APPLICABLE REQUIREMENTS OF ANSI STANDARD A21.11.

FITTINGS: ALL FITTINGS SHALL BE OF DUCTILE IRON WITH GASKETS, GLANDS AND T-HEAD BOLTS WITH NUTS. DUCTILE IRON FITTINGS SHALL CONFORM TO ANSI/AWWA C110/A21.10, 350 POUNDS PER SQUARE INCH (PSI) PRESSURE RATING REQUIREMENTS. ALL FITTINGS SHALL BE CEMENT MORTAR LINED CONFORMING TO ANSI/AWWA C104/A21.4 AND SHALL BE COATED OUTSIDE WITH A BITUMINOUS COATING OR FUSION—BONDED EPOXY. FITTINGS SHALL HAVE DISTINCTLY CAST INTO THE PIPE EXTERIOR THE PRESSURE RATING AND LETTERS "DI" OR "DUCTILE". ALL DUCTILE IRON FITTINGS ACCEPTABLE TO THE UTILITY SHALL BE RATED AT A MINIMUM OF 70-50-05 (KSI TENSILE STRENCHT-KSI YIELD STRENGTH-PERCENT ELONGATION), IN ACCORDANCE WITH ANSI/AWWA C110 STANDARDS REGARDING STRENGTH OF MATERIALS.

FITTING JOINTS SHALL BE OF THE STANDARD MECHANICAL JOINT TYPE CONFORMING TO ANSI/AWW C111/A21.11 OR PUSH JOINT TYPE CONFORMING TO ANSI/AWWA C111/A21.11. ALL GASKETS, GLANDS AND T-HEAD BOLTS SHALL BE IN ACCORDANCE WITH AWWA C111/A21.11.

POLYETHYLENE ENCASEMENT: HIGH DENSITY CROSS—LAMINATED POLYETHYLENE ENCASEMENT MATERIALS SHALL BE USED FOR DUCTILE IRON PIPE AND FITTINGS. THE HIGH DENSITY CROSS-LAMINATED POLYETHYLENE TUBE MATERIAL SHALL CONFORM TO ANSI/AWWA C105 WITH A MINIMUM THICKNESS OF 4 MILS.

VALVES: GATE VALVES SHALL BE USED ON ALL WATERMAINS. ALL VALVES SHALL TURN COUNTER-CLOCKWISE TO OPEN. VALVES SHALL BE IRON BODY RESILIENT WEDGE GATE VALVES WITH BRONZE-MOUNTED SEATS AND NON-RISING STEMS CONFORMING TO AWWA C-509. THE VALVES SHALL HAVE MECHANICAL JOINTS.

WHERE WATERMAINS AND SERVICES CROSS PROPOSED OR EXISTING STREETS, BACKFILL SHALL BE COMPACTED GRANULAR MATERIAL EXTENDING AT LEAST 5 FEET BEYOND THE BACK OF CURB OR

PROVIDE AND INSTALL FOUR MEGALUG JOINT RESTRAINTS AT EACH JOINT FROM THE MAINLINE TEE TO THE AUXILIARY VALVE AND BETWEEN THE AUXILIARY VALVE AND THE HYDRANT BARREL. THE BREAK FLANGE AND ALL BELOW-GRADE FITTING SHALL HAVE STAINLESS STEEL NUTS AND

CORPORATION STOPS: CORPORATION STOPS SHALL BE BRONZE BODY KEY STOPS CONFORMING TO AWWA C-800 AND SHALL INCLUDE "J" BEND, TAILPIECE, AND COMPRESSION FITTINGS. SIZE AND LOCATION AS SHOWN ON THE PLANS.

MAXIMUM DEFLECTION AT PIPE JOINTS SHALL BE IN ACCORDANCE WITH PIPE MANUFACTURER'S CURRENT RECOMMENDATIONS AND AWWA SPECIFICATIONS. BEDDING: ALL WATERMAINS SHALL BE BEDDED ON FIRM GROUND, WITH BELLHOLES EXCAVATED SO

THAT THE PIPE HAS AN EVEN BEDDING FOR ITS ENTIRE LENGTH. GRANULAR BEDDING MATERIAL OR GRANULAR BACKFILL MATERIAL SHALL BE CAREFULLY PLACED TO TWELVE (12) INCHES OVER THE TOP OF THE PIPE BEFORE FINAL BACKFILLING AND

A MINIMUM DEPTH OF COVER OF FIFTY-FOUR (54) INCHES SHALL BE MAINTAINED OVER THE WATER LINES. THE MAXIMUM COVER SHALL BE SEVENTY-TWO (72) INCHES, EXCEPT AT SPECIAL CROSSINGS.

"MEGA-LUG" RETAINER GLANDS AND THRUST BLOCKING SHALL BE INSTALLED ON WATERMAINS AT

ALL BENDS, FITTINGS, TEES, ELBOWS, ETC. "MEGA-LUG" RESTRAINED JOINTS ARE REQUIRED ON ALL VALVES AND ALL FITTINGS.

EDGE OF PAVEMENT.

WATERMAINS SHALL BE LAID AT LEAST TEN (10) FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED DRAIN, STORM SEWER, SANITARY SEWER, OR SEWER SERVICES CONNECTION.

17.2. WATERMAINS MAY BE LAID CLOSER THAN TEN (10) FEET TO A SEWER LINE WHEN: 17.2.1. LOCAL CONDITIONS PREVENT A LATERAL SEPARATION OF TEN (10) FEET;

THE WATERMAIN IS EITHER IN A SEPARATE TRENCH OR IN THE SAME TRENCH ON AN

UNDISTURBED EARTH SHELF LOCATED TO ONE SIDE OF THE SEWER. 17.3. BOTH THE WATERMAIN AND DRAIN OR SEWER SHALL BE CONSTRUCTED WITH PIPE EQUIVALENT TO WATERMAIN STANDARDS OF CONSTRUCTION WHEN IT IS IMPOSSIBLE TO MEET (1) OR (2) ABOVE. THE DRAIN OR SEWER SHALL BE PRESSURE—TESTED TO THE MAXIMUM EXPECTED

SURCHARGE HEAD BEFORE BACKFILLING.

. <u>VERTICAL SEPARATION</u> 18.1. ALL SERVICE PIPES SHALL BE BURIED AT LEAST FIFTY-FOUR (54) INCHES DEEP IN THE

A WATERMAIN SHALL BE LAID SO THAT ITS INVERT IS FIGHTEFN (18) INCHES ABOVE THE CROWN OF THE DRAIN OR SEWER WHENEVER WATERMAINS CROSS STORM SEWERS. SANITARY SEWERS, OR SEWER SERVICE CONNECTIONS, THE VERTICAL SEPARATION SHALL BE MAINTAINED FOR THAT PORTION OF THE WATERMAIN LOCATED WITHIN TEN (10) FEET HORIZONTALLY OF ANY SEWER OR DRAIN CROSSED. A LENGTH OF WATERMAIN PIPE SHALL BE CENTERED OVER THE SEWER TO BE CROSSED WITH JOINTS EQUIDISTANT FROM THE SEWER

18.3. BOTH THE WATERMAINS AND SEWER SHALL BE CONSTRUCTED WITH PIPE EQUIVALENT TO

18.3.1. IT IS IMPOSSIBLE TO OBTAIN THE PROPER VERTICAL SEPARATION, AS DESCRIBED IN (1)

18.4. A VERTICAL SEPARATION OF EIGHTEEN (18) INCHES BETWEEN THE INVERT OF THE SEWER OR DRAIN AND THE CROWN OF THE WATERMAIN SHALL BE MAINTAINED WHERE A WATERMAIN CROSSES UNDER A SEWER. SUPPORT THE SEWER OR DRAIN LINES TO PREVENT SETTLING AND BREAKING THE WATERMAIN.

18.5. CONSTRUCTION SHALL EXTEND ON EACH SIDE OF THE CROSSING UNTIL THE NORMAL DISTANCE FROM THE WATERMAIN TO THE SEWER OR DRAIN LINE IS AT LEAST TEN (10) FEET. ALL WATERMAINS SHALL BE PRESSURE-TESTED FOR A MIN. OF 2 HOURS AT 150 PSI. FLUSHED. AND DISINFECTED IN ACCORDANCE WITH AWWA AND MUNICIPAL SPECIFICATIONS. EACH VALVE SECTION SHALL BE PRESSURE-TESTED FOR A MINIMUM OF ONE (1) HOUR. ALLOWABLE LEAKAGE IS

PER THE ALLOWABLE LEAKAGE TABLE ON SHEET CX.XX. AT NO TIME IS THERE TO BE ANY VISIBLE LEAKAGE FROM THE MAIN.

20. IDEM WATERMAIN NOTES

WATERMAIN STANDARDS OF CONSTRUCTION WHEN:

18.3.2. OR THE WATERMAIN PASSES UNDER A SEWER OR DRAIN.

20.1. ALL WATERLINES SHALL BE AWWA APPROVED. THE NORMAL WORKING PRESSURE IN THE WATERLINES WILL NOT BE LESS THAN 35 PSI.

20.3. INDIVIDUAL BOOSTER PUMPS WILL NOT BE ALLOWED FOR ANY INDIVIDUAL SERVICE. ALL FIRE HYDRANTS SHALL BE AWWA APPROVED.

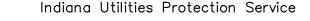
> WARNING: CONTRACTOR TO VERIFY PRESENCE AND EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

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SHEET NUMBER







GRAPHIC SCALE IN FEET 0 75 150 30

DEMOLITION NOTES

GENERAL DEMOLITION NOTES

- 1. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF THE EXISTING STRUCTURES, RELATED UTILITIES, PAVING, AND ANY OTHER EXISTING IMPROVEMENTS AS NOTED.
- 2. CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS. DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.
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HORN AND ASSOCIATES, INC.
STREET, SUITE 580,
A 46240
8-9560
BRN.COM

AS NOIED KIMEY—HORN AND Y: CVS 250 EAST 96TH STREET, INDIANAPOLIS, IN 46240 PHONE: 317—218—9560 BY: BAS WWW.KIMLEY—HORN.COM



CONSTRUCTION

a Tippmam Group Company
ATER ROAD FORT WATE, INDIANA 46825
500) 490-3000 . FAX: (200) 490-8705

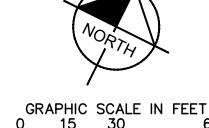
EXISTING CONDITIONS

FRANKLIN IWI PHASE 7A EXPANSION

ORIGINAL ISSUE: 05/09/19 KHA PROJECT NO.

170021004 SHEET NUMBER





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KEY MAP

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ASSOCIATES, INC.
SUITE 580,
No. REVISIONS

| Kimley | Horizon | Kimley | Horizon | CVS | 250 EAST 96TH STREET, SUITE | INDIANAPOLIS, IN 46240 | PHONE: 317-218-9560 | PHONE: 317-218-9560 | WWW.KIMLEY-HORN.COM

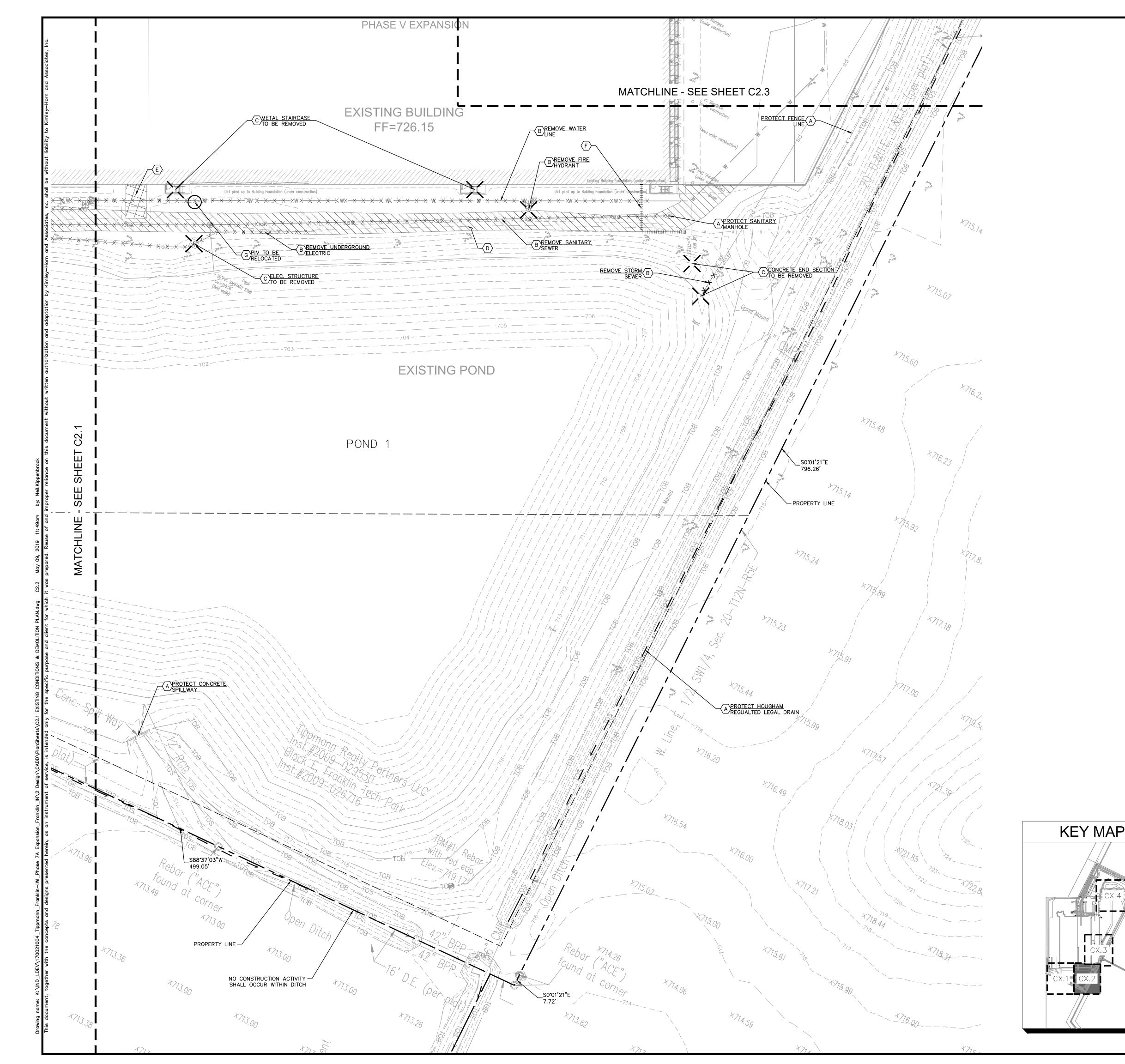
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EXISTING
CONDITIONS &
DEMOLITION
PLAN (1 OF 4)

RANKLIN IWI PHASE 7A EXPANSION

ORIGINAL ISSUE: 05/09/19 KHA PROJECT NO. 170021004

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GRAPHIC SCALE IN FEET 0 15 30 6

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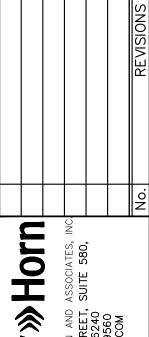
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SNED BY: NPK

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WN BY: CVS
250 EAST 96TH STREET;
INDIANAPOLIS, IN 46240
PHONE: 317-218-9560
WWW.KIMLEY-HORN.COM



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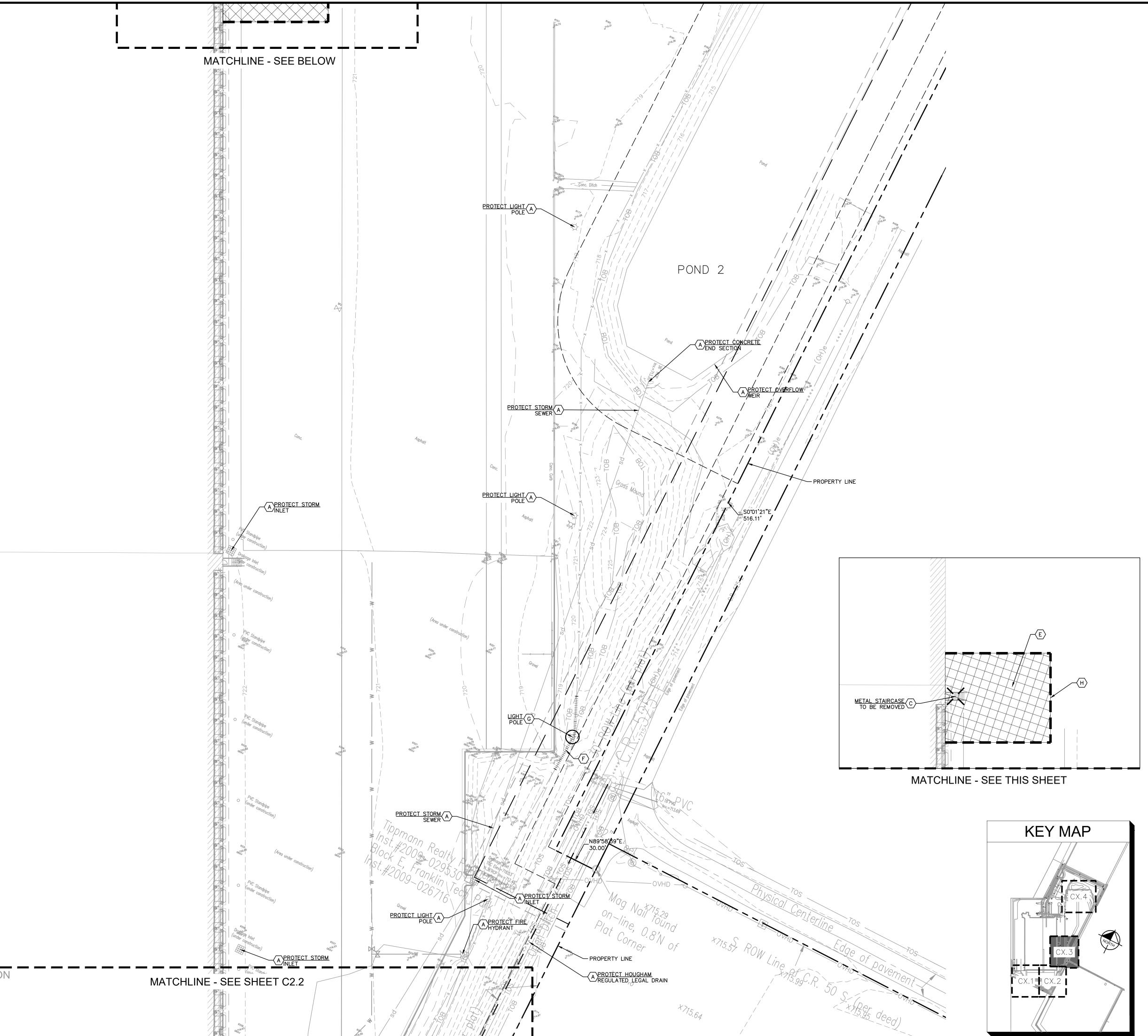
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CONDITIONS & DEMOLITION PLAN (2 OF 4)

FRANKLIN IWI PHASE 7A EXPANSION

ORIGINAL ISSUE: 05/09/19 KHA PROJECT NO. 170021004

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EXISTING UTILITIES, WHICH DO NOT SERVICE STRUCTURES BEING DEMOLISHED, ARE TO BE KEPT IN SERVICE AND PROTECTED AGAINST DAMAGE DURING DEMOLITION OPERATIONS. CONTRACTOR SHALL ARRANGE FOR SHUT—OFF OF UTILITIES SERVING STRUCTURES TO BE DEMOLISHED. CONTRACTOR IS RESPONSIBLE FOR TURNING OFF, DISCONNECTING, AND SEALING INDICATED UTILITIES BEFORE STARTING DEMOLITION OPERATIONS. EXISTING UTILITIES TO BE ABANDONED ARE TO BE CAPPED AT BOTH ENDS AND FILLED WITH FA—1 OR APPROVED EQUAL. ALL UNDERGROUND UTILITIES TO BE REMOVED ARE TO BE BACKFILLED WITH ENGINEERED FILL OR SELECT EXCAVATED MATERIAL, AS APPROVED BY THE GEOTECHNICAL ENGINEER, TO 95% OF MODIFIED PROCTOR DENSITY WITHIN PAVED AREAS AND TO 90% OF MODIFIED PROCTOR DENSITY FOR GREEN SPACE AREAS, IN ACCORDANCE WITH THE EARTHWORK SPECIFICATIONS. ALL PRIVATE UTILITIES (ELECTRIC, CABLE, TELEPHONE, FIBER OPTIC, GAS) SHALL BE REMOVED AND RELOCATED PER THE UTILITY OWNER AND THE LOCAL MUNICIPALITY'S

UTILITY PROTECTION

REQUIREMENTS.

UNDERGROUND UTILITIES SHOWN ARE BASED ON ATLASES AND AVAILABLE INFORMATION PRESENTED AT THE TIME OF SURVEY. CONTRACTOR SHOULD CALL INDIANA 811 (811 OR 800–382–5544) TO COORDINATE FIELD LOCATIONS OF EXISTING UNDERGROUND UTILITIES BEFORE ORDERING MATERIALS OR COMMENCING CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES IMMEDIATELY. CONTRACTOR SHALL LOCATE AND PROTECT EXISTING UNDERGROUND AND OVERHEAD UTILITIES DURING CONSTRUCTION. UTILITY PROTECTION SHALL BE COORDINATED WITH THE RESPECTIVE UTILITY OWNER AND AS DIRECTED BY THE GOVERNING MUNICIPALITY. DAMAGED CABLES/CONDUITS SHALL BE REPLACED IMMEDIATELY. ALL EXISTING STRUCTURES TO REMAIN SHALL BE PROTECTED THROUGHOUT THE CONSTRUCTION PROCESS. ALL DAMAGED STRUCTURES SHALL BE REPLACED IN—KIND AND THEIR REPLACEMENT COST SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. PROPER NOTIFICATION TO THE OWNERS OF THE EXISTING UTILITIES SHALL BE MADE AT LEAST 48 HOURS BEFORE CONSTRUCTION COMMENCES.

POLLUTION CONTROLS

USE WATER SPRINKLING, TEMPORARY ENCLOSURES, AND OTHER SUITABLE METHODS TO LIMIT DUST AND DIRT RISING AND SCATTERING IN THE AIR TO THE LOWEST LEVEL. COMPLY WITH ALL GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION. SEE EROSION CONTROL SHEETS FOR FURTHER EROSION CONTROL REQUIREMENTS.

Kimley» Horn
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250 EAST 96TH STREET, SUITE 580,
INDIANAPOLIS, IN 46240
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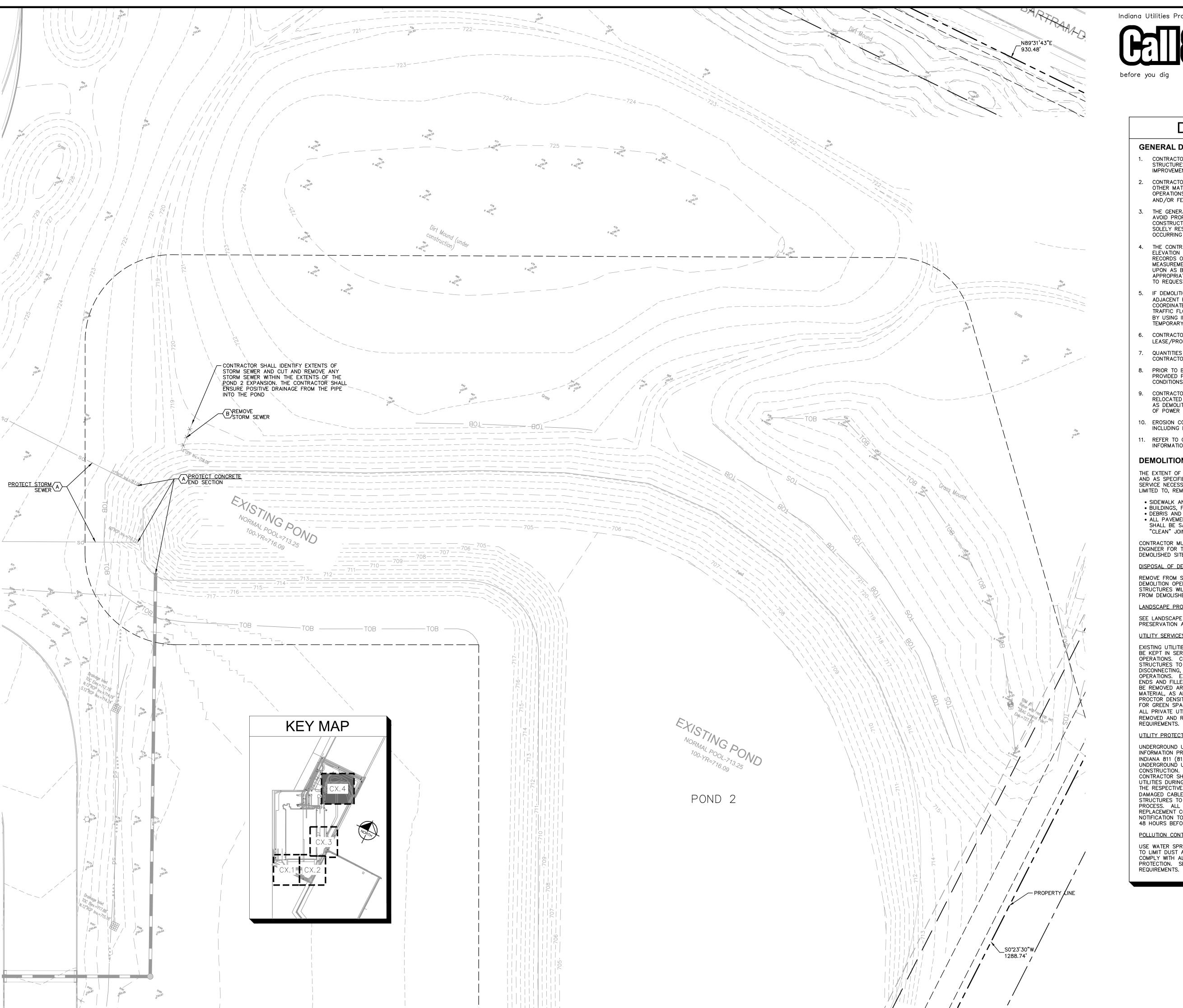
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CONDITIONS & DEMOLITION
PI AN (3 OF 4)

RANKLIN IWI PHASE
7A EXPANSION

ORIGINAL ISSUE: 05/09/19 KHA PROJECT NO. 170021004

SHEET NUMBER







GRAPHIC SCALE IN FEET

DEMOLITION NOTES

GENERAL DEMOLITION NOTES

- 1. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF THE EXISTING STRUCTURES, RELATED UTILITIES, PAVING, AND ANY OTHER EXISTING IMPROVEMENTS AS NOTED.
- CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS. DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.
- THE GENERAL CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT.
- THE 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 UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.
- IF DEMOLITION OR CONSTRUCTION ON SITE WILL INTERFERE WITH THE ADJACENT PROPERTY OWNER'S TRAFFIC FLOW, THE CONTRACTOR SHALL COORDINATE WITH ADJACENT PROPERTY OWNER. TO MINIMIZE THE IMPACT ON TRAFFIC FLOW. TEMPORARY RE-ROUTING OF TRAFFIC IS TO BE ACCOMPLISHED BY USING INDOT APPROVED TRAFFIC BARRICADES, BARRELS, AND/OR CONES. TEMPORARY SIGNAGE AND FLAGMEN MAY BE ALSO NECESSARY.
- 6. CONTRACTOR SHALL NOT DEMOLISH ANYTHING OUTSIDE THE OWNERS LEASE/PROPERTY LINE UNLESS SPECIFICALLY MENTIONED ON THIS SHEET.
- QUANTITIES DEPICTED ON THIS SHEET SHALL SERVE AS A GUIDE ONLY. CONTRACTOR TO VERIFY ALL DEMOLITION QUANTITIES.
- PRIOR TO BIDDING AND CONSTRUCTION, CONTRACTOR TO REFER TO OWNER PROVIDED PHASE I ENVIRONMENTAL SITE ASSESSMENT FOR SITE SPECIFIC CONDITIONS AND CONSIDERATIONS.
- CONTRACTOR SHALL BEGIN CONSTRUCTION OF ANY LIGHT POLE BASES FOR RELOCATED LIGHT FIXTURES AND RELOCATION OF ELECTRICAL SYSTEM AS SOON AS DEMOLITION BEGINS. CONTRACTOR SHALL BE AWARE THAT INTERRUPTION OF POWER TO ANY LIGHT POLES OR SIGNS SHALL NOT EXCEED 24 HOURS
- 10. EROSION CONTROL MUST BE ESTABLISHED PRIOR TO ANY WORK ON SITE INCLUDING DEMOLITION. REFER TO SHEET C4.1—C4.4.
- 11. REFER TO GEOTECHNICAL REPORT PROVIDED BY OTHERS FOR ALL SUBSURFACE

DEMOLITION NOTES

THE EXTENT OF SITE DEMOLITION WORK IS AS SHOWN ON THE CONTRACT DOCUMENTS AND AS SPECIFIED HEREIN. FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND SERVICE NECESSARY TO COMPLETE THE WORK. DEMOLITION INCLUDES, BUT IS NOT LIMITED TO, REMOVAL AND DISPOSAL OFFSITE OF THE FOLLOWING ITEMS:

- SIDEWALK AND ON-SITE PAVEMENT
- BUILDINGS, FOUNDATIONS, AND SUPPORTING WALLS AND SLABS • DEBRIS AND FOUNDATIONS FROM ALL DEMOLISHED STRUCTURES
- ALL PAVEMENT TO BE REMOVED ADJACENT TO PAVEMENT THAT IS TO REMAIN SHALL BE SAWCUT FULL DEPTH AT THE EDGES PRIOR TO REMVAL TO OBTAIN A CONTRACTOR MUST RECEIVE APPROVAL FROM CIVIL ENGINEER AND GEOTECHNICAL

ENGINEER FOR THE MATERIAL TYPE AND USE IF CONTRACTOR DESIRES TO REUSE DEMOLISHED SITE PAVEMENT AS STRUCTURAL FILL.

DISPOSAL OF DEMOLISHED MATERIALS

REMOVE FROM SITE DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM DEMOLITION OPERATIONS. BURNING OF REMOVED MATERIALS FROM DEMOLISHED STRUCTURES WILL NOT BE PERMITTED ON SITE. TRANSPORT MATERIALS REMOVED FROM DEMOLISHED STRUCTURES AND DISPOSE OF OFF SITE IN A LEGAL MANNER.

LANDSCAPE PROTECTION AND REMOVAL

SEE LANDSCAPE PLANS FOR INFORMATION ON LANDSCAPE AND TREE PROTECTION, PRESERVATION AND REMOVAL.

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EXISTING UTILITIES, WHICH DO NOT SERVICE STRUCTURES BEING DEMOLISHED, ARE TO BE KEPT IN SERVICE AND PROTECTED AGAINST DAMAGE DURING DEMOLITION OPERATIONS. CONTRACTOR SHALL ARRANGE FOR SHUT-OFF OF UTILITIES SERVING STRUCTURES TO BE DEMOLISHED. CONTRACTOR IS RESPONSIBLE FOR TURNING OFF, DISCONNECTING, AND SEALING INDICATED UTILITIES BEFORE STARTING DEMOLITION OPERATIONS. EXISTING UTILITIES TO BE ABANDONED ARE TO BE CAPPED AT BOTH ENDS AND FILLED WITH FA-1 OR APPROVED EQUAL. ALL UNDERGROUND UTILITIES T BE REMOVED ARE TO BE BACKFILLED WITH ENGINEERED FILL OR SELECT EXCAVATED MATERIAL, AS APPROVED BY THE GEOTECHNICAL ENGINEER, TO 95% OF MODIFIED PROCTOR DENSITY WITHIN PAVED AREAS AND TO 90% OF MODIFIED PROCTOR DENSITY FOR GREEN SPACE AREAS, IN ACCORDANCE WITH THE EARTHWORK SPECIFICATIONS. ALL PRIVATE UTILITIES (ELECTRIC, CABLE, TELEPHONE, FIBER OPTIC, GAS) SHALL BE REMOVED AND RELOCATED PER THE UTILITY OWNER AND THE LOCAL MUNICIPALITY'S

UTILITY PROTECTION

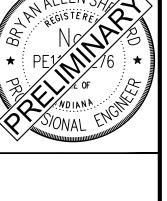
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USE WATER SPRINKLING, TEMPORARY ENCLOSURES, AND OTHER SUITABLE METHODS TO LIMIT DUST AND DIRT RISING AND SCATTERING IN THE AIR TO THE LOWEST LEVEL. COMPLY WITH ALL GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION. SEE EROSION CONTROL SHEETS FOR FURTHER EROSION CONTROL

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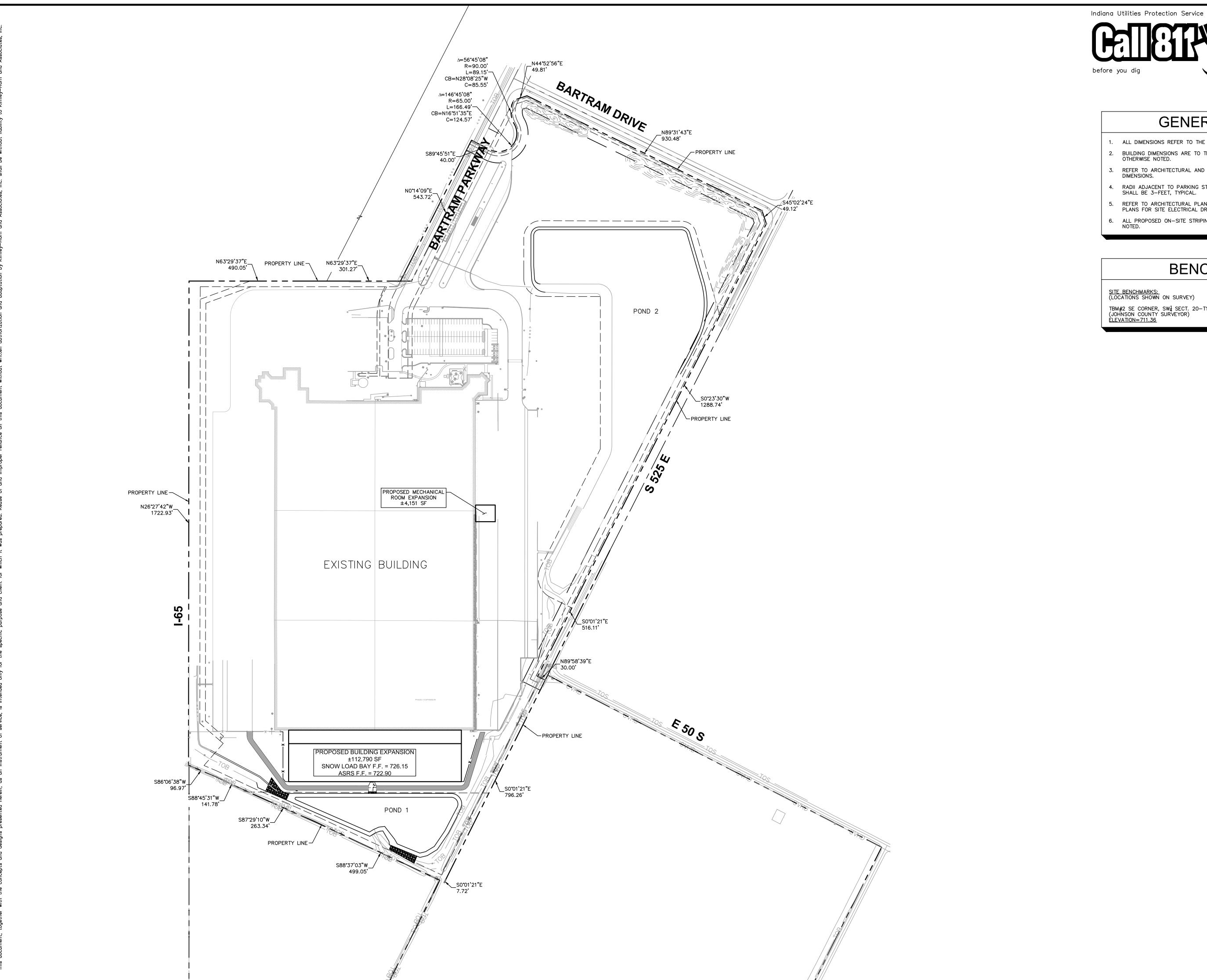


EXISTING
CONDITIONS &
DEMOLITION
PLAN (4 OF 4)

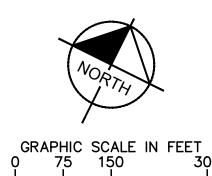
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ORIGINAL ISSUE: 05/09/19 KHA PROJECT NO.

170021004 SHEET NUMBER







GENERAL NOTES

- 1. ALL DIMENSIONS REFER TO THE FACE OF CURB UNLESS OTHERWISE NOTED. 2. BUILDING DIMENSIONS ARE TO THE OUTSIDE FACE OF BUILDING UNLESS OTHERWISE NOTED.
- 3. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS TO VERIFY ALL BUILDING DIMENSIONS.
- 4. RADII ADJACENT TO PARKING STALL AND NOT DIMENSIONED ON THIS PLAN SHALL BE 3-FEET, TYPICAL.
- REFER TO ARCHITECTURAL PLANS FOR MONUMENT SIGN DETAILS. SEE MEP PLANS FOR SITE ELECTRICAL DRAWINGS.
- 6. ALL PROPOSED ON-SITE STRIPING SHALL BE PAINTED UNLESS OTHERWISE NOTED.

BENCHMARKS

SITE BENCHMARKS: (LOCATIONS SHOWN ON SURVEY)

TBM#2 SE CORNER, SW[‡] SECT. 20-T12N-R5E MAG NAIL FOUND (JOHNSON COUNTY SURVEYOR) ELEVATION=711.36

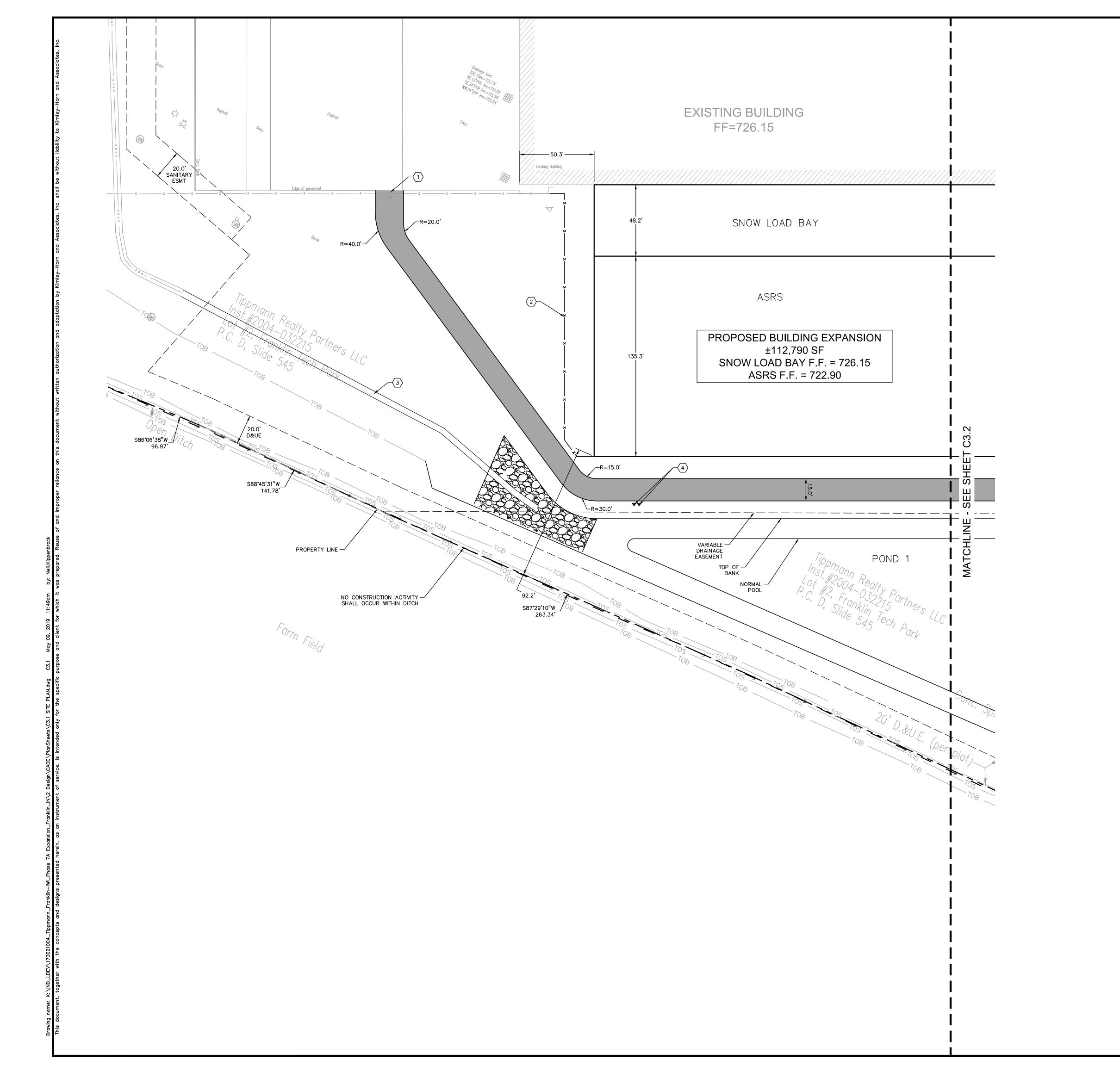
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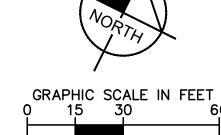
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FRANKLIN IWI PHASE 7A EXPANSION

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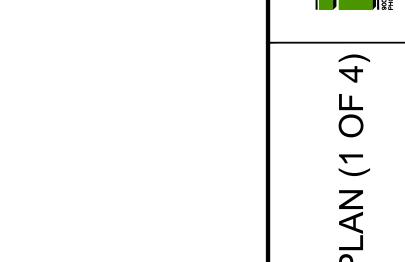
KEY NOTES

- (1) CONNECT TO EXISTING PAVEMENT, SIDEWALK, CURB, TYP.
- 2 PROPOSED FENCE, BY OTHERS
- 3 CONCRETE SWALE EXTENSION (SEE DETAILS)
- 4 GROUND LIGHTING, SEE LIGHTING PLAN
- 5 DOUBLE SWING GATE

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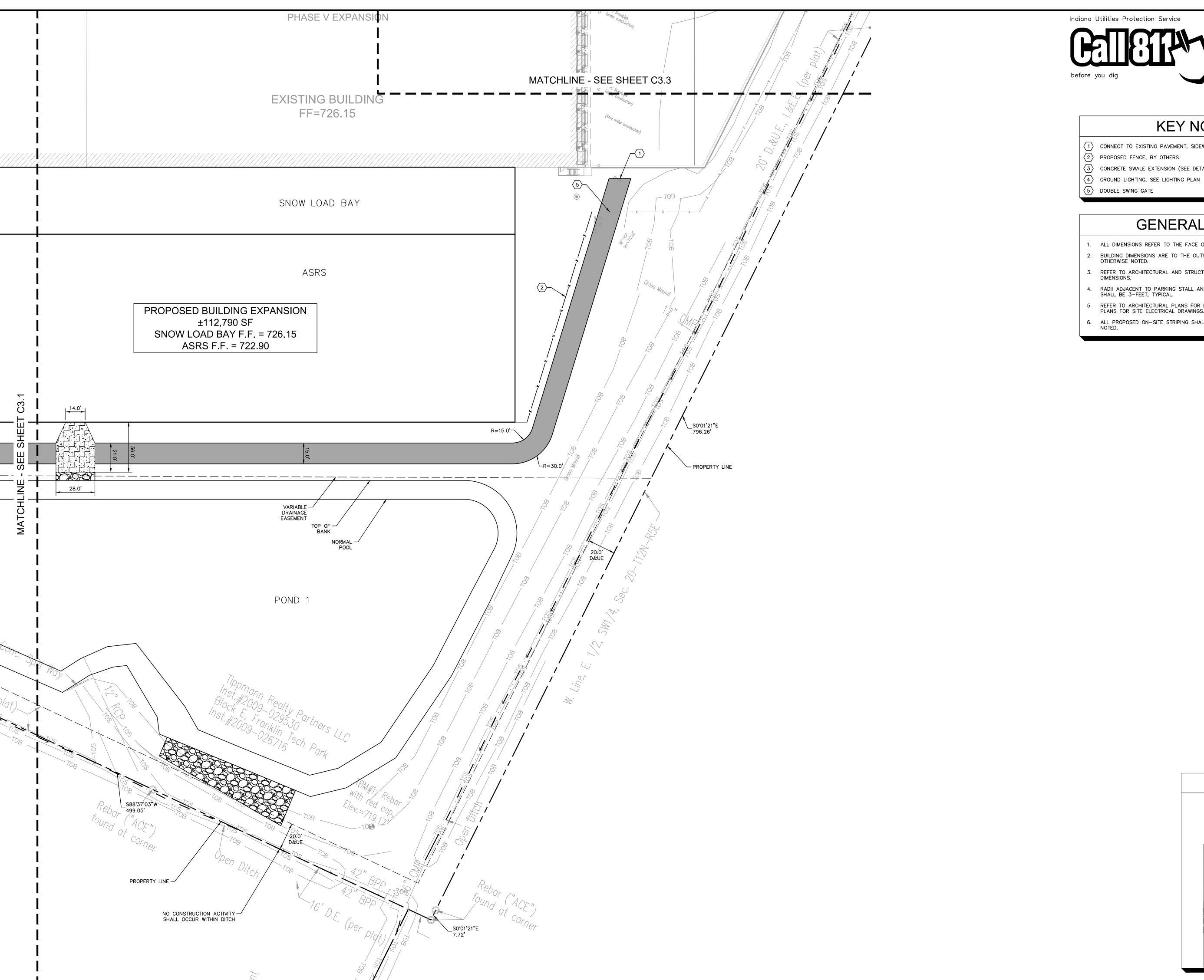
KEY MAP

SITE FRANKLIN IWI PHASE 7A EXPANSION

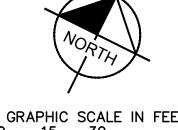
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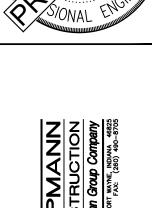
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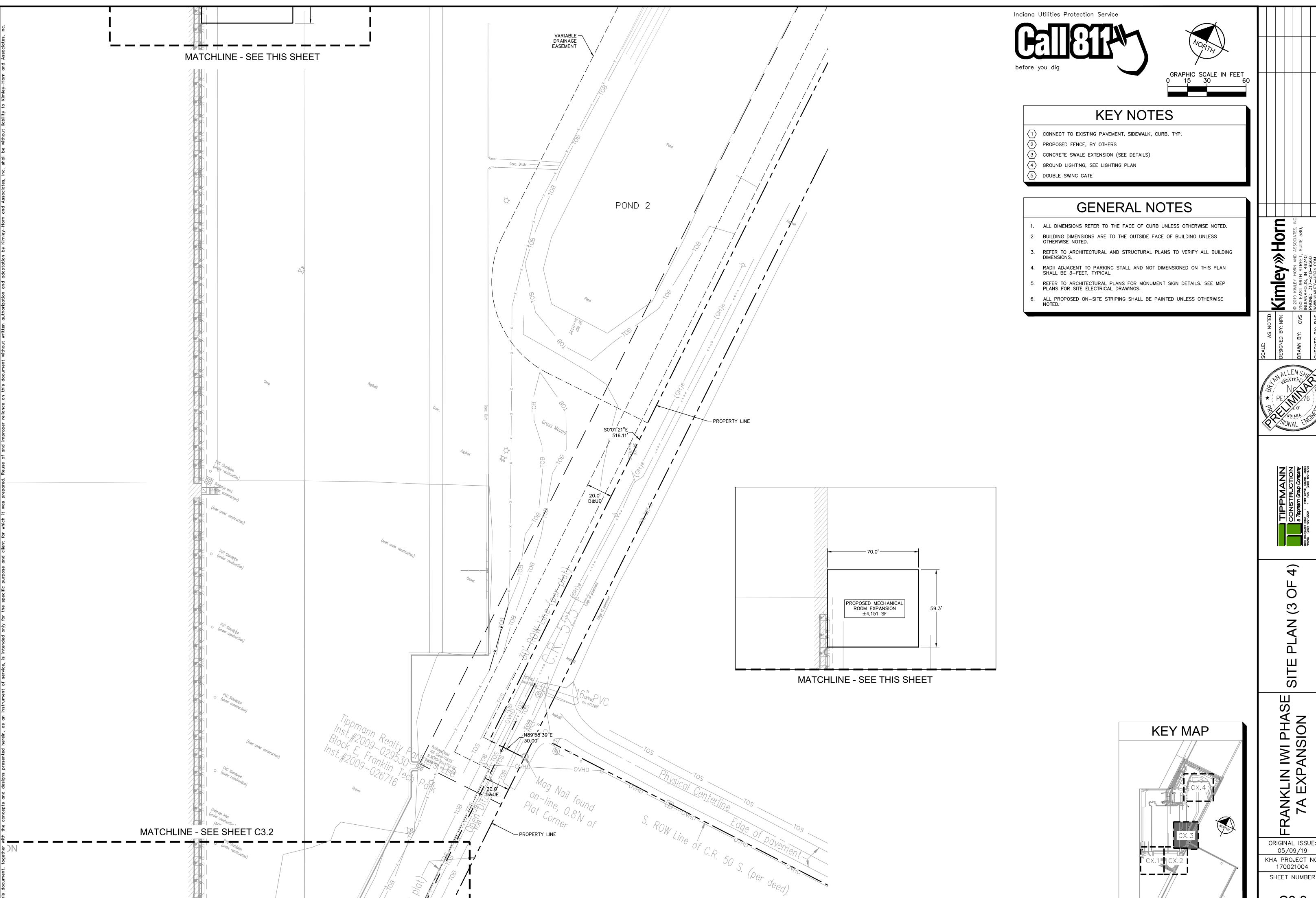
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KEY MAP

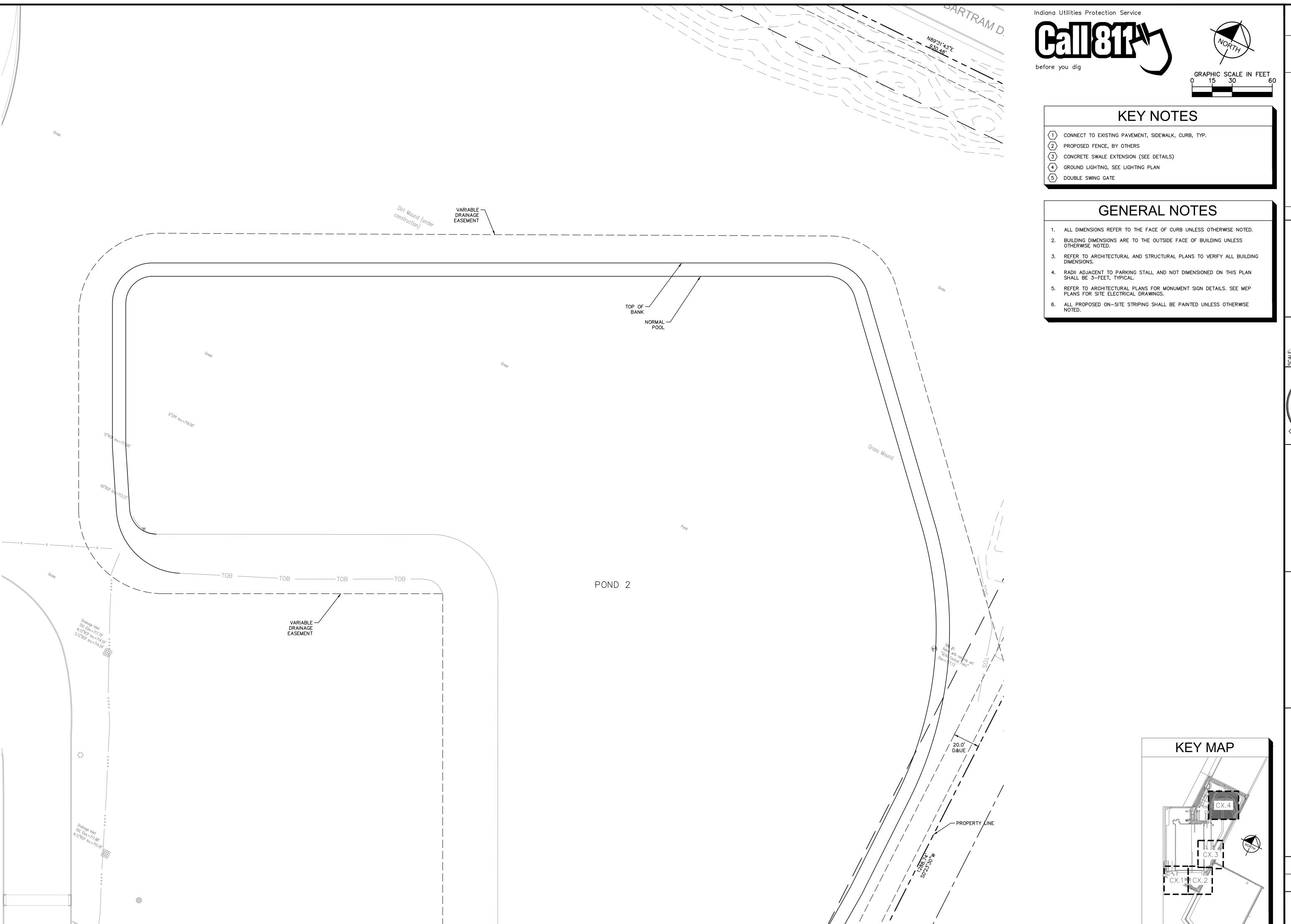
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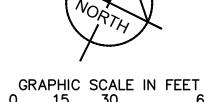
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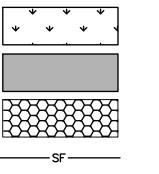


EROSION CONTROL NOTES

TEMPORARY EROSION CONTROL NOTES

- ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENTATION CONTROL
- FROM THOSE SHOWN ON THE APPROVED PLANS WILL REQUIRE A REVISION AND MUST BE APPROVED BY THE REVIEWING ENGINEER, ENVIRONMENTAL SPECIALIST, OR ARBORIST AS APPROPRIATE. MAJOR REVISIONS MUST BE APPROVED BY THE PLANNING AND DEVELOPMENT DEPARTMENT AND THE DRAINAGE UTILITY DEPARTMENT. MINOR CHANGES OR ADDITIONAL CONTROL MEASURES TO BE MADE AS FIELD REVISIONS TO THE EROSION AND SEDIMENTATION CONTROL PLAN MAY BE REQUIRED BY THE ENVIRONMENTAL INSPECTOR DURING THE COURSE OF CONSTRUCTION TO CORRECT CONTROL INADEQUACIES AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL PLACE EROSION CONTROL BLANKET (NORTH AMERICAN GREEN S150BN OR APPROVED EQUAL) ON ALL SITE AREAS WITH SLOPES
- PRIOR TO FINAL ACCEPTANCE, HAUL ROADS AND WATERWAY CROSSINGS CONSTRUCTED FOR TEMPORARY CONTRACTOR ACCESS MUST BE REMOVED, ACCUMULATED SEDIMENT REMOVED FROM THE WATERWAY AND THE AREA RESTORED TO THE ORIGINAL GRADE AND REVEGETATED. ALL LAND CLEARING SHALL BE DISPOSED OF IN APPROVED SPOIL DISPOSAL SITES.
- PERMANENT, FINAL PLANT COVERING OR STRUCTURES SHALL BE INSTALLED
- ROLLS MUST BE REPAIRED, REPLACED OR SUPPLEMENTED WITH EFFECTIVE CONTROLS WHEN THEY BECOME NONFUNCTIONAL OR THE SEDIMENT REACHES ONE-THIRD THE HEIGHT OF THE DEVICE. THESE REPAIRS MUST BE MADE
- ALL SEDIMENT DELTAS AND DEPOSITS MUST BE REMOVED FROM SURFACE WATERS, DRAINAGE WAYS, CATCH BASINS AND OTHER DRAINAGE SYSTEMS. ALL AREAS WHERE SEDIMENT REMOVAL RESULTED IN EXPOSED SOIL MUST BE RESTABILIZED. THE REMOVAL AND STABILIZATION MUST TAKE PLACE IMMEDIATELY, BUT NO MORE THAN 7 DAYS AFTER THE RAINFALL EVENT UNLESS PRECLUDED BY LEGAL, REGULATORY OR PHYSICAL ACCESS CONSTRAINTS. ALL REASONABLE EFFORTS MUST BE USED TO OBTAIN ACCESS. ONCE ACCESS IS OBTAINED, REMOVAL AND STABILIZATION MUST TAKE PLACE IMMEDIATELY, BUT NO MORE THAN 7 DAYS LATER. CONTRACTOR IS RESPONSIBLE FOR
- FROM OFF-SITE PAVED SURFACES WITHIN 24 HOURS OR SOONER IF REQUIRED. SEDIMENT TRACKING MUST BE MINIMIZED BY THE APPROPRIATE MANAGEMENT PRACTICE, LIKE A DEDICATED SITE EXIT WITH AN AGGREGATE SURFACE OR DESIGNATED OFFSITE PARKING AREA. CONTRACTOR IS RESPONSIBLE FOR STREET SWEEPING AND/OR SCRAPING IF YOUR PRACTICES ARE NOT ADEQUATE TO PREVENT SEDIMENT FROM BEING TRACKED FROM THE SITE.
- EITHER DIRECTLY OR INDIRECTLY WITHOUT FILTRATION IS PROHIBITED.
- AREA OR A DESIGNATED BUFFER, UNLESS OTHERWISE APPROVED, UNDER SPECIFIC CONDITIONS TO BE ESTABLISHED BY THE DIRECTOR OR
- 13. ALL TEMPORARY SESC MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL STABILIZATION IS ACHIEVED.TRAPPED SEDIMENT AND OTHER DISTURBED SOLD RESULTING FROM TEMPORARY MEASURES SHALL BE PROPERLY DISPOSED OF PRIOR TO PERMANENT STABILIZATION.
- CONTROL AND/OR FILTRATION DEVICE. WHEN DEWATERING DEVICES ARE USED,

EROSION CONTROL LEGEND



TS TEMPORARY SEEDING (SEE EROSION CONTROL DETAILS)

TEMPORARY EROSION CONTROL BLANKET (SEE TEMPORARY EROSION CONTROL NOTE #3)

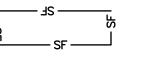
CE) CONSTRUCTION ENTRANCE (SEE EROSION CONTROL DETAILS)

SF SILT FENCE (SEE EROSION CONTROL DETAILS)

AREA INLET PROTECTION (SEE EROSION CONTROL DETAILS) CONCRETE WASHOUT (SEE EROSION CONTROL DETAILS)

(TO BE DETERMINED BY CONTRACTOR)

RIP RAP
(SEE EROSION CONTROL DETAILS)



SS TEMPORARY SOIL STOCKPILE

LD LIMITS OF DISTURBANCE

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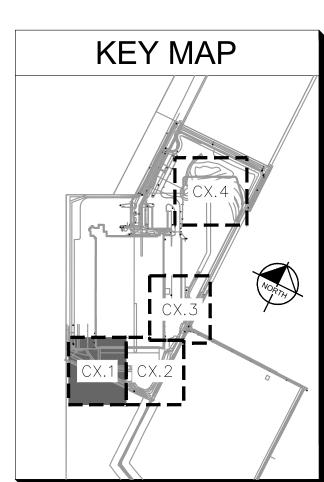
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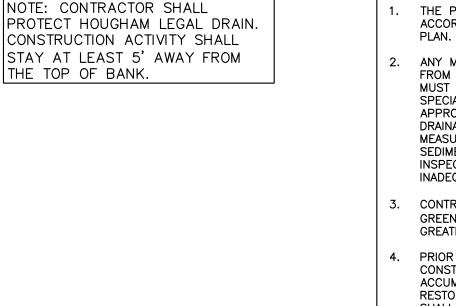
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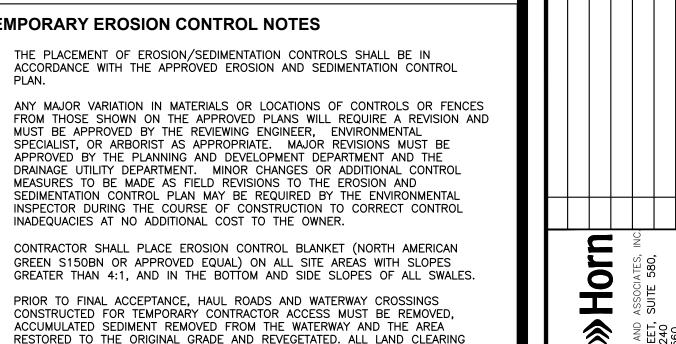
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C4.1







PRIOR TO FINAL ACCEPTANCE. ALL CONTROL DEVICES THAT FUNCTION SIMILARLY TO SILT FENCE OR FIBER

WITHIN 24 HOURS OF THE RAINFALL EVENT OR AS SOON AS FIELD CONDITIONS

CONTACTING ALL APPROPRIATE AUTHORITIES AND RECEIVING THE APPLICABLE PERMITS PRIOR TO CONDUCTING ANY WORK.

ACCUMULATIONS OF TRACKED AND DEPOSITED SEDIMENT MUST BE REMOVED

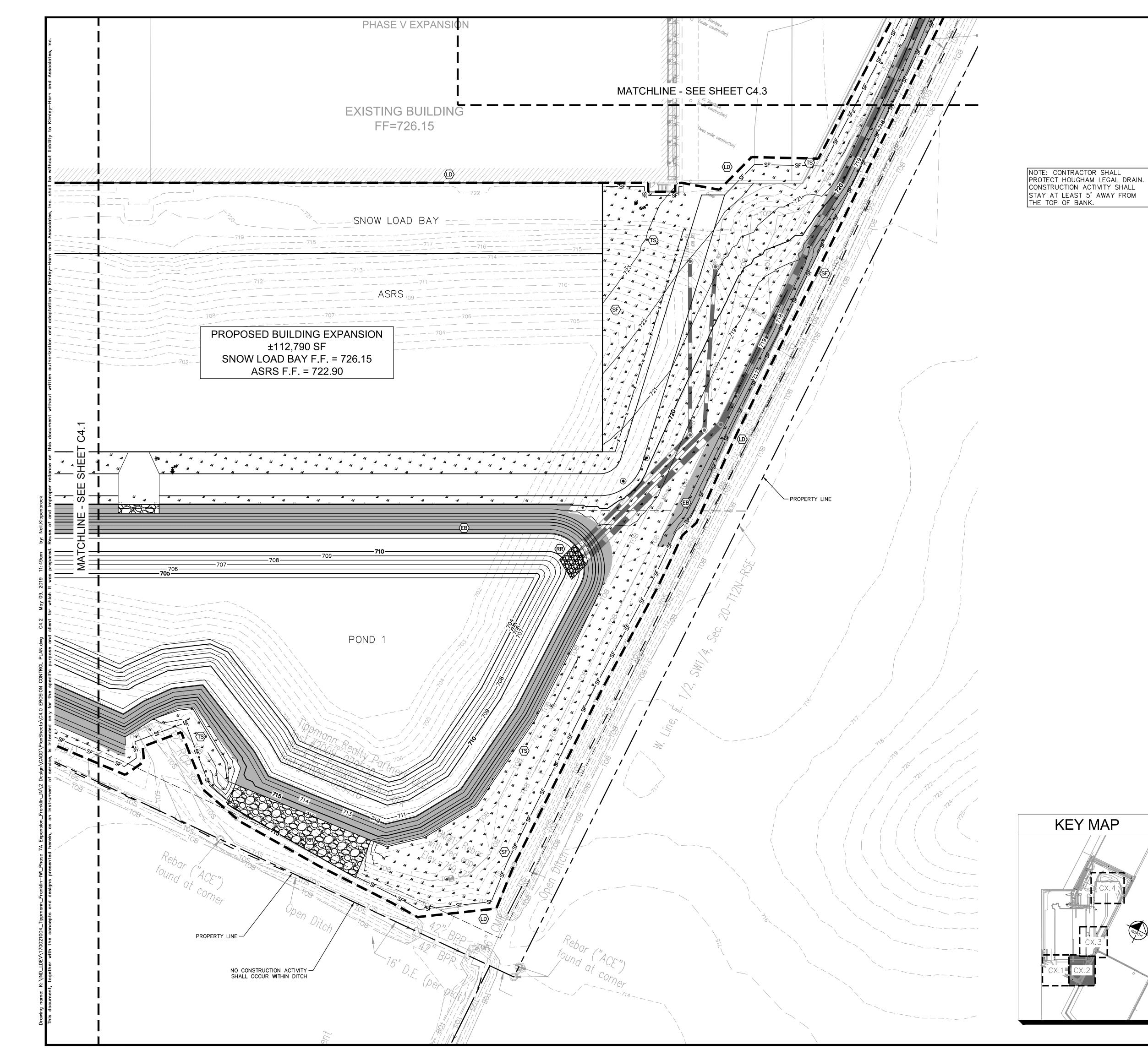
SURFACE WATERS, DRAINAGE DITCHES AND CONVEYANCE SYSTEMS MUST BE INSPECTED FOR SEDIMENT DEPOSITS.

10. PUMPING SEDIMENT LADEN WATER INTO ANY STORMWATER FACILITY THAT IS NOT DESIGNATED TO BE A SEDIMENT TRAP, DRAINAGEWAY, OR OFFSITE AREA

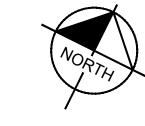
11. SOIL STOCKPILES SHALL NOT BE LOCATED IN A DRAINAGEWAY, FLOOD PLAIN ADMINISTRATOR.

12. STOCKPILES TO REMAIN IN PLACE FOR MORE THAN THREE DAYS SHALL BE PROVIDED WITH SESC MEASURES. MATERIAL IS TO BE HAULED OFF IMMEDIATELY AND LEGALLY IF NO STOCKPILE IS TO REMAIN IN PLACE.

4. WATER REMOVED FROM TRAPS, BASINS, AND OTHER WATER HOLDING DEPRESSIONS OR EXCAVATIONS MUST FIRST PASS THROUGH A SEDIMENT DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION.







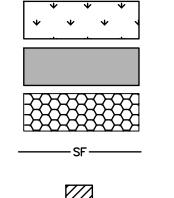
GRAPHIC SCALE IN FEET

EROSION CONTROL NOTES

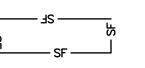
TEMPORARY EROSION CONTROL NOTES

- THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENTATION CONTROL
- ANY MAJOR VARIATION IN MATERIALS OR LOCATIONS OF CONTROLS OR FENCES FROM THOSE SHOWN ON THE APPROVED PLANS WILL REQUIRE A REVISION AND MUST BE APPROVED BY THE REVIEWING ENGINEER, ENVIRONMENTAL SPECIALIST, OR ARBORIST AS APPROPRIATE. MAJOR REVISIONS MUST BE APPROVED BY THE PLANNING AND DEVELOPMENT DEPARTMENT AND THE DRAINAGE UTILITY DEPARTMENT. MINOR CHANGES OR ADDITIONAL CONTROL MEASURES TO BE MADE AS FIELD REVISIONS TO THE EROSION AND SEDIMENTATION CONTROL PLAN MAY BE REQUIRED BY THE ENVIRONMENTAL INSPECTOR DURING THE COURSE OF CONSTRUCTION TO CORRECT CONTROL INADEQUACIES AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL PLACE EROSION CONTROL BLANKET (NORTH AMERICAN GREEN S150BN OR APPROVED EQUAL) ON ALL SITE AREAS WITH SLOPES GREATER THAN 4:1, AND IN THE BOTTOM AND SIDE SLOPES OF ALL SWALES.
- PRIOR TO FINAL ACCEPTANCE, HAUL ROADS AND WATERWAY CROSSINGS CONSTRUCTED FOR TEMPORARY CONTRACTOR ACCESS MUST BE REMOVED, ACCUMULATED SEDIMENT REMOVED FROM THE WATERWAY AND THE AREA RESTORED TO THE ORIGINAL GRADE AND REVEGETATED. ALL LAND CLEARING SHALL BE DISPOSED OF IN APPROVED SPOIL DISPOSAL SITES.
- PERMANENT, FINAL PLANT COVERING OR STRUCTURES SHALL BE INSTALLED PRIOR TO FINAL ACCEPTANCE.
- ALL CONTROL DEVICES THAT FUNCTION SIMILARLY TO SILT FENCE OR FIBER ROLLS MUST BE REPAIRED, REPLACED OR SUPPLEMENTED WITH EFFECTIVE CONTROLS WHEN THEY BECOME NONFUNCTIONAL OR THE SEDIMENT REACHES ONE-THIRD THE HEIGHT OF THE DEVICE. THESE REPAIRS MUST BE MADE WITHIN 24 HOURS OF THE RAINFALL EVENT OR AS SOON AS FIELD CONDITIONS
- ALL SEDIMENT DELTAS AND DEPOSITS MUST BE REMOVED FROM SURFACE WATERS, DRAINAGE WAYS, CATCH BASINS AND OTHER DRAINAGE SYSTEMS. ALL AREAS WHERE SEDIMENT REMOVAL RESULTED IN EXPOSED SOIL MUST BE RESTABILIZED. THE REMOVAL AND STABILIZATION MUST TAKE PLACE IMMEDIATELY, BUT NO MORE THAN 7 DAYS AFTER THE RAINFALL EVENT UNLESS PRECLUDED BY LEGAL, REGULATORY OR PHYSICAL ACCESS CONSTRAINTS. ALL REASONABLE EFFORTS MUST BE USED TO OBTAIN ACCESS. ONCE ACCESS IS OBTAINED, REMOVAL AND STABILIZATION MUST TAKE PLACE IMMEDIATELY, BUT NO MORE THAN 7 DAYS LATER. CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL APPROPRIATE AUTHORITIES AND RECEIVING THE APPLICABLE PERMITS PRIOR TO CONDUCTING ANY WORK.
- ACCUMULATIONS OF TRACKED AND DEPOSITED SEDIMENT MUST BE REMOVED FROM OFF-SITE PAVED SURFACES WITHIN 24 HOURS OR SOONER IF REQUIRED. SEDIMENT TRACKING MUST BE MINIMIZED BY THE APPROPRIATE MANAGEMENT PRACTICE, LIKE A DEDICATED SITE EXIT WITH AN AGGREGATE SURFACE OR DESIGNATED OFFSITE PARKING AREA. CONTRACTOR IS RESPONSIBLE FOR STREET SWEEPING AND/OR SCRAPING IF YOUR PRACTICES ARE NOT ADEQUATE TO PREVENT SEDIMENT FROM BEING TRACKED FROM THE SITE.
- SURFACE WATERS, DRAINAGE DITCHES AND CONVEYANCE SYSTEMS MUST BE INSPECTED FOR SEDIMENT DEPOSITS.
- 10. PUMPING SEDIMENT LADEN WATER INTO ANY STORMWATER FACILITY THAT IS NOT DESIGNATED TO BE A SEDIMENT TRAP, DRAINAGEWAY, OR OFFSITE AREA EITHER DIRECTLY OR INDIRECTLY WITHOUT FILTRATION IS PROHIBITED.
- 11. SOIL STOCKPILES SHALL NOT BE LOCATED IN A DRAINAGEWAY, FLOOD PLAIN AREA OR A DESIGNATED BUFFER, UNLESS OTHERWISE APPROVED, UNDER SPECIFIC CONDITIONS TO BE ESTABLISHED BY THE DIRECTOR OR ADMINISTRATOR.
- 12. STOCKPILES TO REMAIN IN PLACE FOR MORE THAN THREE DAYS SHALL BE PROVIDED WITH SESC MEASURES. MATERIAL IS TO BE HAULED OFF IMMEDIATELY AND LEGALLY IF NO STOCKPILE IS TO REMAIN IN PLACE.
- 13. ALL TEMPORARY SESC MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL STABILIZATION IS ACHIEVED.TRAPPED SEDIMENT AND OTHER DISTURBED SOILS RESULTING FROM TEMPORARY MEASURES SHALL BE PROPERLY DISPOSED OF PRIOR TO PERMANENT STABILIZATION.
- 4. WATER REMOVED FROM TRAPS, BASINS, AND OTHER WATER HOLDING DEPRESSIONS OR EXCAVATIONS MUST FIRST PASS THROUGH A SEDIMENT CONTROL AND/OR FILTRATION DEVICE. WHEN DEWATERING DEVICES ARE USED, DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION.

EROSION CONTROL LEGEND



- TS TEMPORARY SEEDING (SEE EROSION CONTROL DETAILS)
- TEMPORARY EROSION CONTROL BLANKET (SEE TEMPORARY EROSION CONTROL NOTE #3)
- CE CONSTRUCTION ENTRANCE (SEE EROSION CONTROL DETAILS)
- SF) SILT FENCE (SEE EROSION CONTROL DETAILS)
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- CONCRETE WASHOUT (SEE EROSION CONTROL DETAILS) (TO BE DETERMINED BY CONTRACTOR)
- (SEE EROSION CONTROL DETAILS)



TEMPORARY SOIL STOCKPILE

(LD) LIMITS OF DISTURBANCE

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EXISTING CONTOURS PROPOSED CONTOURS

> ORIGINAL ISSUE: 05/09/19 KHA PROJECT NO. 170021004

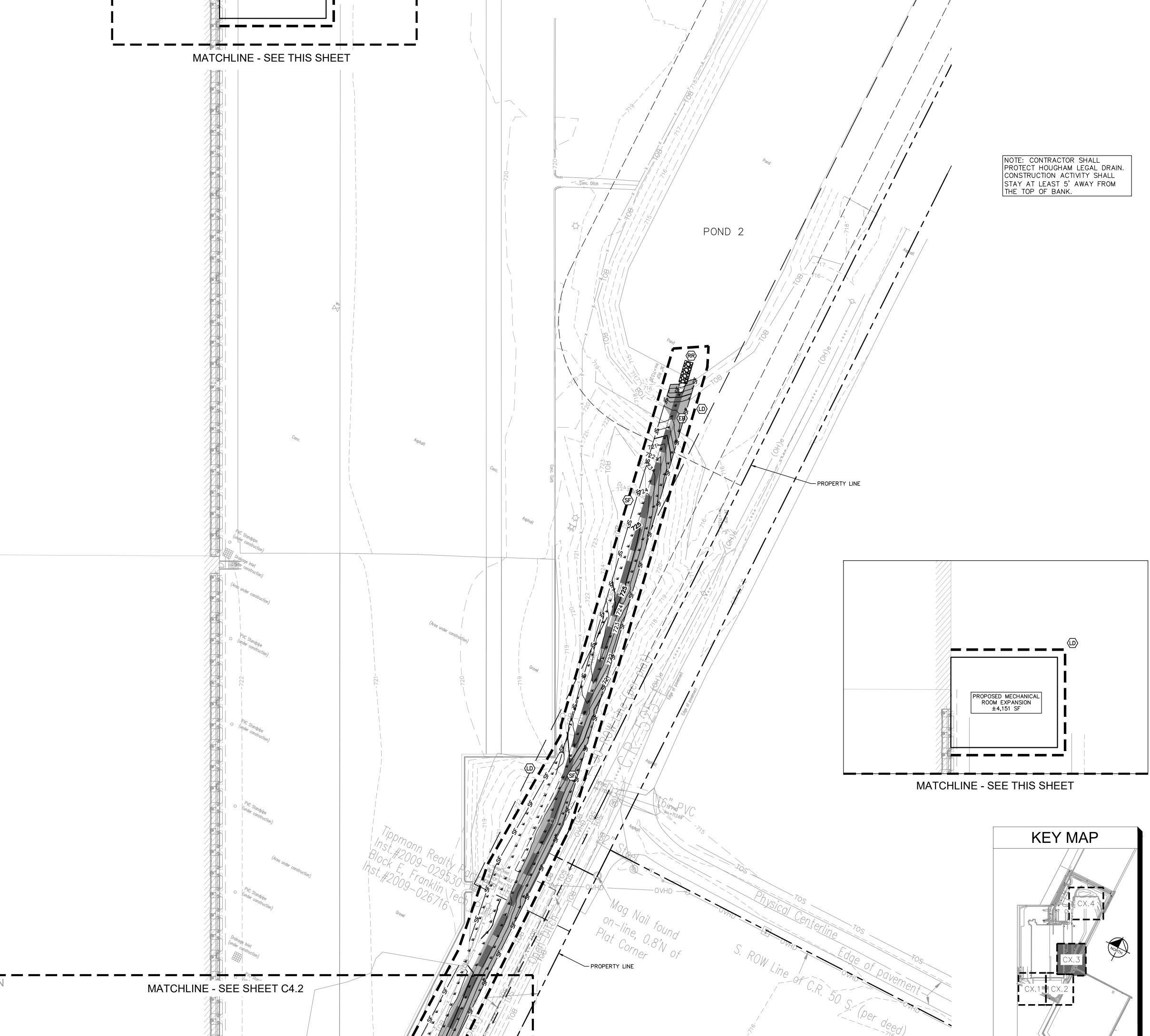
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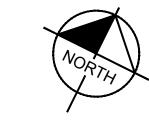


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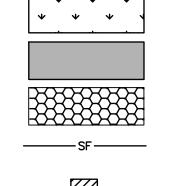
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EROSION CONTROL NOTES

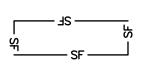
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- PRIOR TO FINAL ACCEPTANCE, HAUL ROADS AND WATERWAY CROSSINGS CONSTRUCTED FOR TEMPORARY CONTRACTOR ACCESS MUST BE REMOVED, ACCUMULATED SEDIMENT REMOVED FROM THE WATERWAY AND THE AREA RESTORED TO THE ORIGINAL GRADE AND REVEGETATED. ALL LAND CLEARING SHALL BE DISPOSED OF IN APPROVED SPOIL DISPOSAL SITES.
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SS TEMPORARY SOIL STOCKPILE

(LD) LIMITS OF DISTURBANCE

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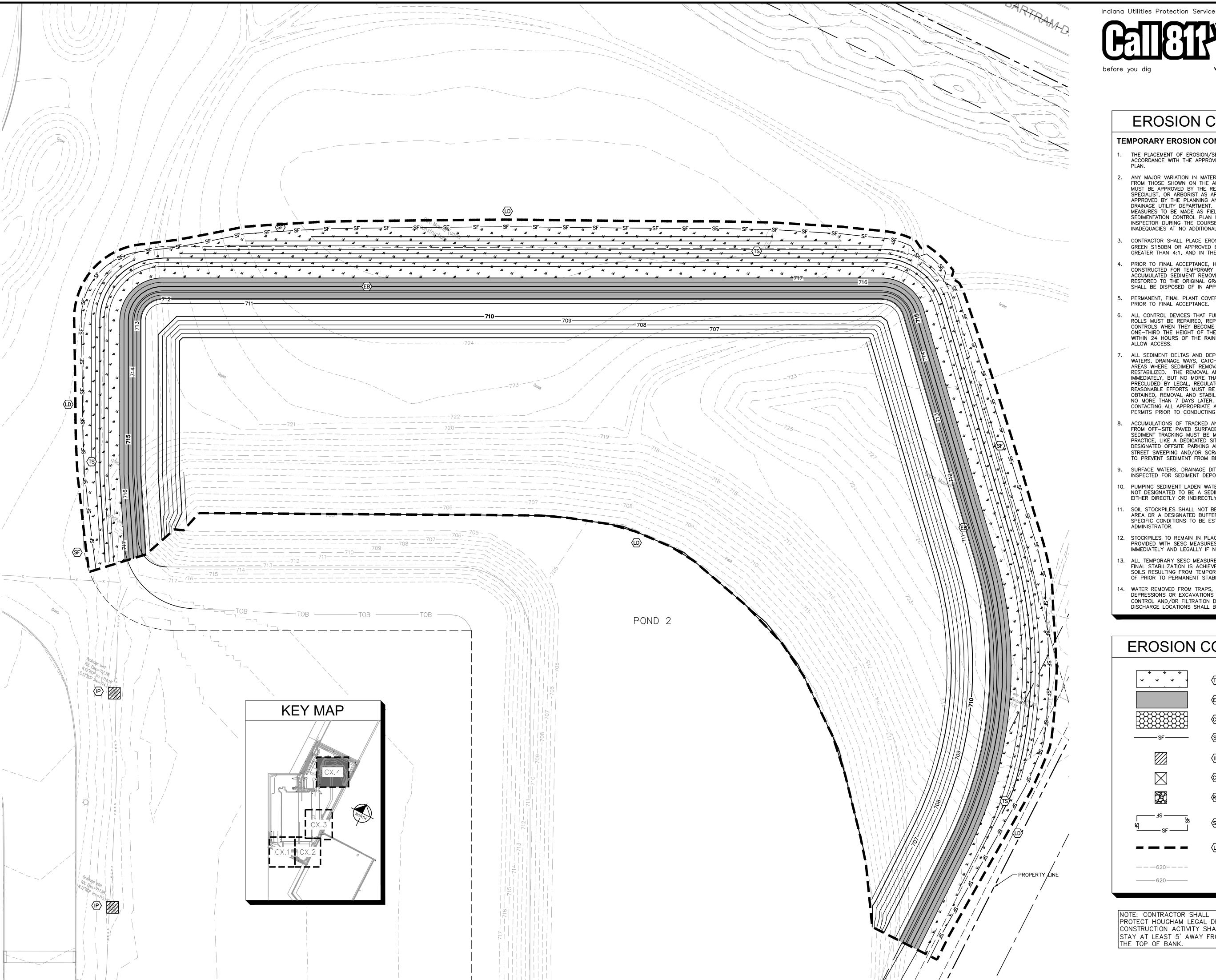
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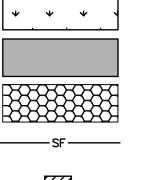
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(TO BE DETERMINED BY CONTRACTOR) RIP RAP (SEE EROSION CONTROL DETAILS)

SS TEMPORARY SOIL STOCKPILE

LD LIMITS OF DISTURBANCE

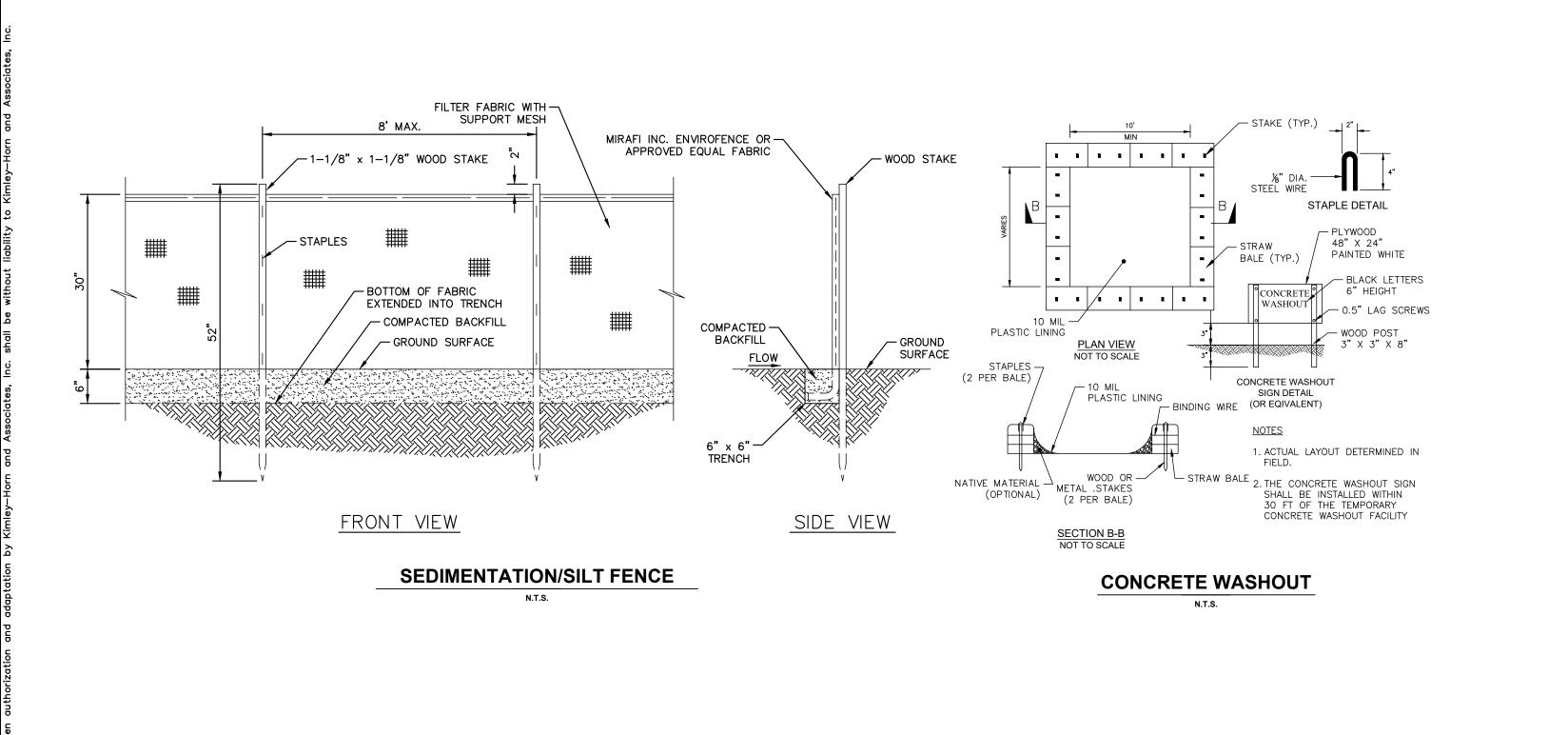
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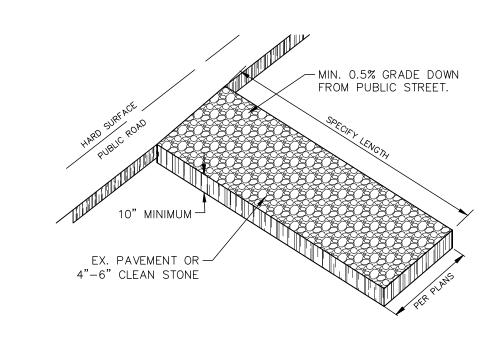
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NOTE: CONTRACTOR SHALL PROTECT HOUGHAM LEGAL DRAIN. CONSTRUCTION ACTIVITY SHALL STAY AT LEAST 5' AWAY FROM

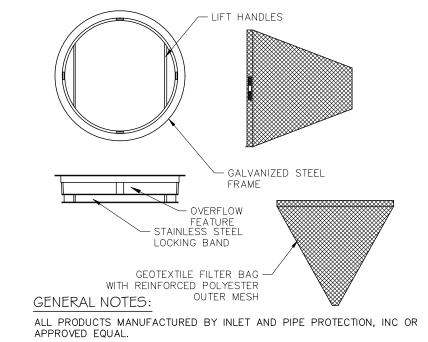
ORIGINAL ISSUE: 05/09/19 KHA PROJECT NO. 170021004 SHEET NUMBER

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CONSTRUCTION ENTRANCE



NOTE: INLET FILTERS ARE SLIGHTLY SMALLER THAN THE INLET GRATE SIZES. WHEN IDENTIFYING OR SPECIFYING FILTERS/CASTINGS PLEASE REFER TO THE DIAMETER "D" OR WIDTH "W" AND HEIGHT "H" OF FILTER FRAMES OR CASTING GRATES. YOU MAY ALSO REFER TO OUR CASTING CROSS

NOTE: ROUND AND SQUARE INLET FILTERS AVAILABLE FOR MOST NEENAH AND EAST JORDAN BEEHIVE, ROLL CURB AND CURB BOX FRAME TYPES ALL IPP INLET FILTERS TO CONFORM TO INDOT SPECIFICATIONS .

REFERENCE GUIDE FOR INDOT STANDARDS

INLET PROTECTION N.T.S.

| STABILIZATION TYPE | JAN. | FEB. | MAR. | APR. | MAY | JUNE | JULY | AUG. | SEPT. | ост. | NOV. | DEC. |
|----------------------|------|------|------------|------|-----|------|------|------|-------|------|------|------|
| PERMANENT SEEDING | | | • <u>A</u> | | | * | * | | - | | | |
| DORMANT | В | | | | | | | | | | В | |
| SEEDING | | | _ | | | | | | | | | |
| TEMPORARY | | | _C | | | | D | | | | | |
| SEEDING | | | | | | _ | | | | | | |
| CODDINO | | | E | | | | | | | | | |
| SODDING | | | ** | | | | | | | | | |
| 14111 OLUMO | F | | | | | | | | | | | |
| MULCHING | | | | | | | | | | | | |

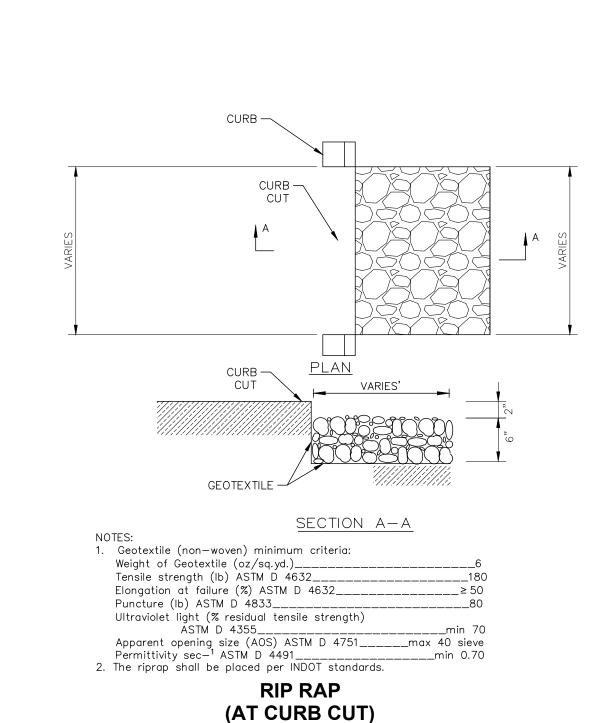
A KENTUCKY BLUEGRASS 90 LBS/ACRE MIXED WITH PERENNIAL D RYEGRASS 30 LBS/ACRE B KENTUCKY BLUEGRASS 135

LBS/ACRE MIXED WITH PERENNIAL

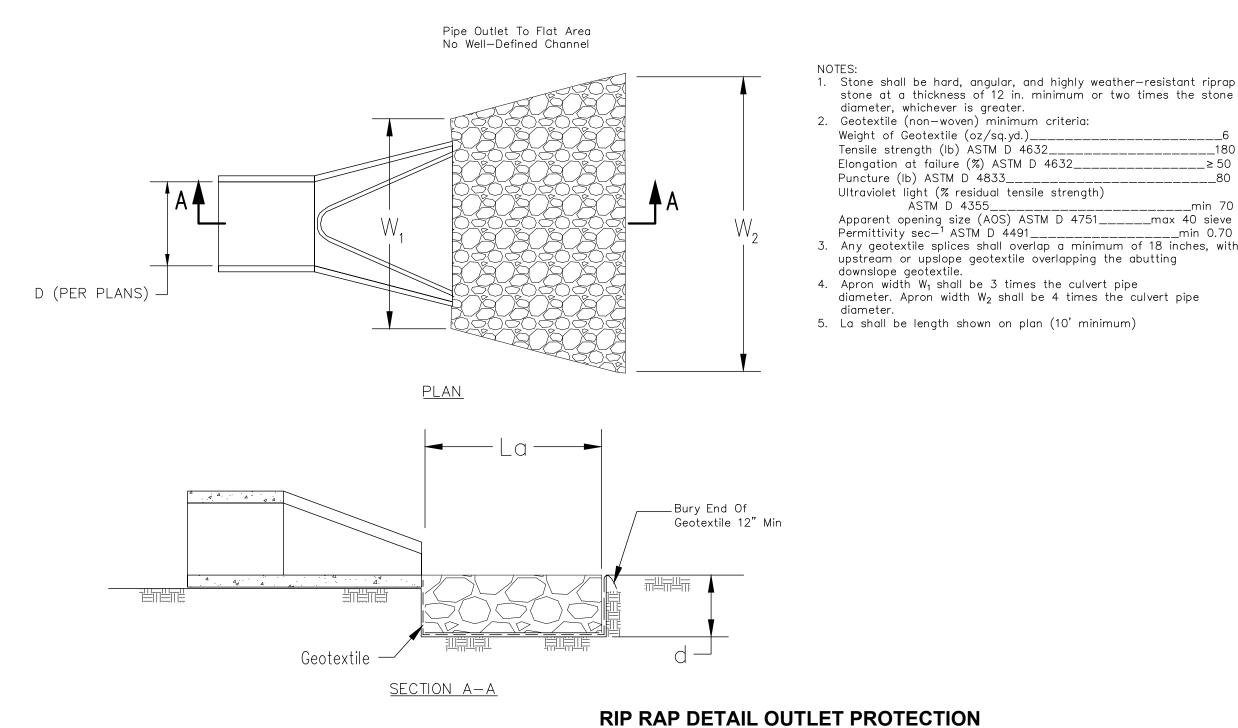
RYEGRASS 45 LBS/ACRE + 2 TONS STRAW MULCH/ACRE

- C SPRING OATS 100 LBS/ACRE WHEAT OR CEREAL RYE 150 LBS/ACRE
- E SOD F STRAW MULCH 2 TONS/ACRE
- * IRRIGATION NEEDED DURING JUNE AND JULY ** IRRIGATION NEEDED FOR 2 TO 3 WEEKS AFTER APPLYING SOD

SEEDING CHART



N.T.S.

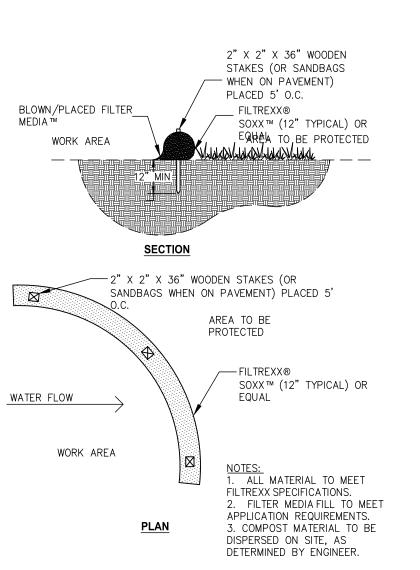


Weight of Geotextile (oz/sq.yd.)__ Tensile strength (lb) ASTM D 4632_ Elongation at failure (%) ASTM D 4632_ Puncture (lb) ASTM D 4833__ Ultraviolet light (% residual tensile strength) ASTM D 4355__ Apparent opening size (AOS) ASTM D 4751_____max 40 sieve Permittivity sec-1 ASTM D 4491______ 3. Any geotextile splices shall overlap a minimum of 18 inches, with upstream or upslope geotextile overlapping the abutting downslope geotextile.

4. Apron width W₁ shall be 3 times the culvert pipe diameter. Apron width W2 shall be 4 times the culvert pipe 5. La shall be length shown on plan (10' minimum)

RIP RAP DETAIL OUTLET PROTECTION

diameter, whichever is greater.



FILTER SOCK SEDIMENT CONTROL

ORIGINAL ISSUE: 05/09/19 KHA PROJECT NO. 170021004

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THE AREA SCHEDULED FOR CONSTRUCTION IS KNOWN AS "FRANKLIN IWI PHASE 7A EXPANSION" (HEREINAFTER REFERRED TO AS THE "PROJECT").

PROJECT LOCATION

THE PROJECT IS LOCATED IN NEEDHAM TOWNSHIP, JOHNSON COUNTY, INDIANA. ADDRESS: 700 BARTRAM PARKWAY, FRANKLIN, IN 46131

LONGITUDE: 86°00'20"W OWNER'S INFORMATION

LATITUDE: 39°28'14"N

TIPPMANN REALTY PARTNERS, LLC ADDRESS: 9009 COLDWATER ROAD, FT WAYNE, IN 46825 REPRESENTATIVE: JASON BRANSTETTER TELEPHONE: (260) 469-5442

DEVELOPER'S INFORMATION

NAME: SAME AS OWNER ADDRESS: REPRESENTATIVE: TELEPHONE:

NOTICE OF INTENT

ALL PARTIES DEFINED AS OWNERS OR DEVELOPERS MUST SUBMIT A NOTICE OF INTENT (NOI) AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF ON-SITE CONSTRUCTION ACTIVITIES. SUBMITTAL OF LATE NOI'S IS NOT PROHIBITED; HOWEVER, AUTHORIZATION UNDER THE CONSTRUCTION GENERAL PERMIT IS ONLY FOR DISCHARGES THAT OCCUR AFTER PERMIT COVERAGE IS GRANTED. UNPERMITTED DISCHARGES MAY BE SUBJECT TO ENFORCEMENT ACTION BY THE EPA. FOR THE PURPOSES OF THIS PERMIT, AN OPERATOR OR DEVELOPER IS DEFINED AS ANY PARTY MEETING EITHER OF THE FOLLOWING REQUIREMENTS:

1) THE PARTY HAS OPERATIONAL CONTROL OVER CONSTRUCTION PLANS AND SPECIFICATIONS, INCLUDING THE ABILITY TO MAKE MODIFICATIONS TO THOSE PLANS AND SPECIFICATIONS. 2) THE PARTY HAS DAY-TO-DAY OPERATIONAL CONTROL OF THOSE ACTIVITIES AT A PROJECT THAT ARE NECESSARY TO ENSURE COMPLIANCE WITH A STORMWATER

POLLUTION PREVENTION PLAN FOR THE SITE OR OTHER PERMIT CONDITIONS.

ASSESSMENT OF CONSTRUCTION PLANT ELEMENTS - SECTION A

<u>A1 INDEX SHOWING LOCATIONS OF REQUIRED PLAN ELEMENTS</u>

REFER TO THE FOLLOWING LIST

<u>A2 11"x17" PLAT</u>

REFER TO THE ALTA/NSPS LAND TITLE & TOPOGRAPHIC SURVEY.

A3 PROJECT DESCRIPTION

CONSTRUCTION OF A ±112,790 SF WAREHOUSE EXPANSION FOR INTERSTATE WAREHOUSING IN SECTION 20 OF T12N, R5E IN THE CITY OF FRANKLIN, JOHNSON COUNTY, INDIANA

44 VICINITY MAP

REFER TO THE TITLE SHEET (CO.O).

A5 LEGAL DESCRIPTION OF THE PROJECT SITE REFER TO THE TITLE SHEET (CO.O).

A6 LOCATION OF ALL LOTS AND PROPOSED SITE IMPROVEMENTS REFER TO THE SITE PLAN SHEETS (C3.0-C3.4)

47 HYDROLOGIC UNIT CODE (14-DIGIT)

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A8 STATE / FEDERAL WATER QUALITY PERMITS

AN INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT RULE 5 NOTICE OF INTENT WILL BE REQUIRED DUE TO THE AREA OF SOIL DISTURBANCE REQUIRED FOR THIS PROJECT.

A9 SPECIFIC POINTS WHERE STORMWATER DISCHARGE WILL LEAVE THE PROJECT SITE

ONSITE STORMWATER RUNOFF WILL BE COLLECTED BY STORM SEWERS AND WET DETENTION BASINS AND WILL BE DIRECTED TO THE SOUTHEASTERN PORTION OF THE SITE. STORMWATER WILL DISCHARGE TO THE HOUGHAM LEGAL DRAIN.

A10 LOCATION AND NAME OF ALL WETLANDS, LAKES AND WATER COURSES ON AND ADJACENT TO THE PROJECT SITE

THE HOUGHAM LEGAL DRAIN CURRENTLY RUNS ADJACENT TO THE EAST AND SOUTH PROPERTY LINES OF THE PROJECT SITE.

A11 IDENTIFICATION OF RECEIVING WATERS

EFFLUENT FROM THE SITE WILL DISCHARGE INTOTHE HOUGHAM LEGAL DRAIN TO THE SOUTHEAST OF THE PROJECT SITE AND EVENTUALLY DRAINS TO YOUNG'S CREEK-AMITY

A12 IDENTIFICATION OF POTENTIAL DISCHARGES TO GROUND WATER

THE PROJECT SITE INCLUDES TWO WET PONDS.

A13 100-YEAR FLOODPLAINS, FLOODWAYS, AND FLOODWAY FRINGES

THE PROJECT SITE RESIDES ENTIRELY WITHIN ZONE "X", AS INDICATED BY FIRM MAP PANELS 18081C0232D AND 18081C0234D, DATED AUGUST 02, 2007. ZONE "X" ARE AREAS OF MINIMAL FLOOD HAZARD.

A14 PRE-CONSTRUCTION AND POST CONSTRUCTION ESTIMATE OF PEAK DISCHARGE (10-YEAR STORM EVENT)

EXISTING CONDITIONS PEAK $Q = \pm 38.75$ CFS PROPOSED CONDITIONS PEAK $Q = \pm 17.24$ CFS

A15 ADJACENT LANDUSE, INCLUDING UPSTREAM WATERSHED

NORTH: WAREHOUSE SOUTH: AGRICULTURAL EAST: AGRICULTURAL/FORESTED

WEST: AGRICULTURAL

A16 LOCATIONS AND APPROXIMATE BOUNDARIES OF ALL DISTURBED AREAS

REFER TO EROSION CONTROL PLAN SHEETS (C4.1-C4.4) FOR APPROXIMATE LIMITS OF DISTURBANCE.

A17 IDENTIFICATION OF EXISTING VEGETATIVE COVER

THE EXISTING VEGETATIVE COVER IS PREDOMINATELY BRUSH.

A18 SOILS MAP INCLUDING SOIL DESCRIPTIONS AND LIMITATIONS

THE UNITED STATES DEPARTMENT OF AGRICULTURE (USDA) NATURAL RESOURCES CONSERVATION SERVICE (NRCS) WEB SOIL SURVEY OF JOHNSON COUNTY, INDIANA, INDICATES THAT BROOKSTON SILTY CLAY LOAM, 0 TO 2 PERCENT SLOPES (Br), CROSBY SILT LOAM, FINE-LOAMY SUBSOIL, 0 TO 2 PERCENT SLOPES (CrA), CROSBY-MIAMI SILT LOAMS, 2 TO 4 PERCENT SLOPES (CsB2), AND MIAMI SILT LOAMS, 2 TO 6 PERCENT SLOPES (MnB2) ARE THE PREDOMINANT SOILS WITHIN THE PROJECT SITE AREA. THE SOILS PRESENT HAVE A VERY LIMITED RATING.

A19 LOCATIONS, SIZE AND DIMENSIONS OF PROPOSED STORMWATER SYSTEMS

REFER TO UTILITY PLAN SHEETS (C6.1-C6.4) FOR PROPOSED STORM INFRASTRUCTURE

A20 PLANS FOR ANY OFF-SITE CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS PROJECT NOT APPLICABLE

A21 LOCATIONS OF PROPOSED SOIL STOCKPILES AND/OR BORROW/DISPOSAL AREAS

REFER TO EROSION CONTROL PLAN SHEETS (C4.1-C4.4) FOR PROPOSED SOIL STOCKPILE LOCATIONS.

A22 EXISTING SITE TOPOGRAPHY AT AN INTERVAL APPROPRIATE TO INDICATE DRAINAGE

THE EXISTING TOPOGRAPHY WITHIN THE PROJECT SITE IS SHOWN ON THE EXISTING

A23 PROPOSED FINAL TOPOGRAPHY AT AN INTERVAL APPROPRIATE TO INDICATE DRAINAGE

THE PROPOSED TOPOGRAPHY WITHIN THE PROJECT SITE IS SHOWN ON THE GRADING AND

SWPPP - CONSTRUCTION - SECTION B

DRAINAGE PLAN SHEETS (C5.1-C5.4).

CONDITIONS AND DEMOLITION PLAN SHEETS C2.0-C2.4.

B1 DESCRIPTION OF POTENTIAL POLLUTANT SOURCES ASSOCIATED WITH CONSTRUCTION

THE FOLLOWING POTENTIAL POLLUTANT SOURCES MAY BE ASSOCIATED WITH CONSTRUCTION ACTIVITIES AT THE PROJECT SITE:

1. SIGNIFICANT MATERIAL INVENTORY

1.1. THE VEHICLES USED BY THE FACILITY POSE A THREAT TO STORMWATER RUNOFF. STORMWATER IN THE AREA COULD BE CONTAMINATED BY AUTOMOBILE FLUIDS CONTAINING HEAVY METALS, OIL, GREASE, AND ALCOHOLS. FUELING OF VEHICLES SHOULD OCCUR ONLY IN MAINTENANCE GARAGES. OR OTHER APPROVED LOCATIONS. CONCRETE PAVEMENT SHOULD BE LAID IN FUELING AREAS, AND APPROPRIATE DRAIN COLLECTION SYSTEMS (INDEPENDENT OF STORM SEWER SYSTEMS) SHALL BE INSTALLED. THE VEHICLES SHOULD BE MAINTAINED REGULARLY TO AVOID LEAKAGE.

1.2. THE BITUMINOUS ASPHALT THAT IS BEING LAID ALSO POSES A POTENTIAL POLLUTION RISK. WHEN THE ASPHALT COMES IN CONTACT WITH RAINWATER, PETROLEUM SURFACTANTS CAN BE LIFTED FROM THE ASPHALT AND RANSPORTED INTO THE STORM SEWER. THESE POLLUTANTS CAN BE HARMFUL TO ANIMALS.

2. POTENTIAL POLLUTANTS

2.1. SOLID WASTE DISPOSAL - NO SOLID MATERIALS, INCLUDING BUILDING MATERIALS ARE ALLOWED TO BE DISCHARGED FROM THE SITE VIA STORMWATER. ALL SOLID WASTE, INCLUDING DISPOSABLE MATERIALS INCIDENTAL TO THE MAJOR CONSTRUCTION ACTIVITIES, MUST BE COLLECTED AND PLACED IN CONTAINERS. ALL CONTAINERS (DUMPSTERS) MUST BE COVERED. INDIANA'S SOLID WASTE REGULATIONS REQUIRE THAT CONSTRUCTION AND DEMOLITION WASTE BE TAKEN TO A PERMITTED SANITARY LANDFILL. NO LIQUIDS OR HAZARDOUS WASTE WILL BE ACCEPTED. THE CONTRACTOR SHALL CONTACT THE NEAREST IDEM FIELD OFFICE TO DETERMINE THE NEAREST PERMITTED SANITARY LANDFILL. NO RUBBLE MAY BE PLACED WITHIN WATERWAYS, FLOODPLAINS, OR WETLANDS WITHOUT IDEM OR JURISDICTION

2.2. SANITARY FACILITIES - ALL PERSONNEL INVOLVED WITH CONSTRUCTION ACTIVITIES MUST COMPLY WITH STATE AND LOCAL SANITARY OR SEPTIC SYSTEM REGULATIONS. TEMPORARY SANITARY FACILITIES WILL BE PROVIDED AT THE SITE THROUGHOUT THE CONSTRUCTION PHASE. THEY MUST BE UTILIZED BY ALL CONSTRUCTION PERSONNEL AND WILL BE SERVICED BY A COMMERCIAL OPERATOR.

2.3. HAUL MATERIALS - ALL MATERIALS HAULED TO OR FROM THE SITE SHOULI BE SECURED TO PREVENT LITTERING AND ANY SPILLS MUST BE CLEANED UP

2.4. CONCRETE/MASONRY - A DUMPSTER WASHOUT SHALL BE PRESENT ONSITE. CONTRACTOR SHALL NOT USE UNLINED EARTHEN PITS BUT SHALL ENSURE HAT THE WASHOUT IS AN APPROPRIATE SIZE AND INCLUDES A LINING AND SOMETHING TO PREVENT THE POLLUTANTS FROM REACHING THE STORM SEWER SYSTEM AND THE SOILS ONSITE. TO PROLONG THE LIFE OF THE WASHOUTS, SCRAPINGS MAY BE STOCKPILED NEXT TO THE WASHOUT, PROVIDED THE WASHOUT AND STOCKPILE ARE REGULARLY MAINTAINED, LEGIBLY SIGNED WITH USE INSTRUCTIONS, AND THE AREA RESTORED TO PREVIOUS CONDITIONS WHEN

2.5. LITTER — THE CONSTRUCTION SITE SHALL BE KEPT CLEAN AT ALL TIMES. MISCELLANEOUS LITTER POSES A THREAT TO SURROUNDING WATERWAYS AND IS AN AESTHETIC NUISANCE.

B2 SEQUENCE DESCRIBING STORMWATER QUALITY MEASURE IMPLEMENTATION RELATIVE TO LAND DISTURBING ACTIVITIES

1. FILE RULE 5 WITH IDEM AT LEAST 48 HOURS PRIOR TO STARTING CONSTRUCTION

2. INSTALL CONSTRUCTION ENTRANCE 3. INSTALL SILT FENCE AROUND PERIMETER OF THE PROJECT SITE AND INLET

PROTECTION AT INLETS. 4. POST NOI AT ENTRANCE.

5. DESIGNATE A PERSON TO BE RESPONSIBLE FOR SITE INSPECTIONS AFTER EACH RAINFALL AND A MINIMUM OF 1 TIME PER WEEK.

6. INSTALL STAGING AREA, FUELING STATION, MATERIAL STORAGE AREA, CONCRETE WASHOUT, AND PORT-O-LET.

7. STRIP TOPSOIL AND STOCKPILE. 8. REMOVE PAVEMENT AND OTHER ITEMS SHOWN TO BE DEMOLISHED.

9. ROUGH GRADE THE PROJECT SITE, SEED DISTURBED AREAS IMMEDIATELY FOLLOWING ROUGH GRADING. AREAS THAT WILL NOT BE DISTURBED AGAIN SHOULD BE PERMANENTLY SEEDED. NO UN-VEGETATED AREAS SHALL BE LEFT EXPOSED FOR MORE THAN 7 DAYS.

10. BEGIN SITE CONSTRUCTION. 11. INSTALL UNDERGROUND UTILITIES. EROSION CONTROL MEASURES SHALL BE INSTALLED AT NEW DRAIN INLET LOCATIONS IMMEDIATELY UPON INSTALLATION.

12. FINAL GRADE THE SITE. 13. PAVING OPERATIONS. EROSION CONTROL MEASURES SHALL BE LEFT IN-PLACE UNTIL

THE SITE VEGETATION HAS ESTABLISHED. 14. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AT THE CONCLUSION OF THE PROJECT AS DIRECTED BY THE COUNTY AND THE NPDES PERMIT AND LEAVE PERMANENT EROSION CONTROL MEASURES IN PLACE.

B3 STABLE CONSTRUCTION ENTRANCE LOCATIONS AND SPECIFICATIONS (AT ALL POINTS OF INGRESS AND EGRESS)

REFER TO THE EROSION CONTROL PLAN SHEETS FOR THE PROPOSED LOCATION OF THE CONSTRUCTION ENTRANCE. REFER TO THE EROSION CONTROL DETAILS SHEET C4.5 FOR CONSTRUCTION ENTRANCE DETAILS. THE ENTRANCE SHALL BE INSTALLED PRIOR TO ANY

B4 SEDIMENT CONTROL MEASURES FOR SHEET FLOW AREAS

REFER TO THE EROSION CONTROL PLAN SHEETS (C4.1-C4.4) FOR SHEET FLOW AREAS TO BE PROTECTED BY SILT FENCE, SEEDING, MULCHING, OR HYDROSEEDING.

B5 SEDIMENT CONTROL MEASURES FOR CONCENTRATED FLOW AREAS

SIGNIFICANT CONCENTRATED FLOW AREAS ARE NOT ANTICIPATED AT THE PROJECT SITE. IF CONCENTRATED FLOW IS EXPERIENCED DUE TO INTERIM GRADING DURING CONSTRUCTION, CONTRACTOR SHALL UTILIZE EROSION CONTROL BLANKETS OR RIPRAP CHECK DAMS TO SLOW RUNOFF AND REDUCE THE POTENTIAL FOR EROSION AND SEDIMENTATION. SILT FENCES AND STRAW BALES ARE NOT AN ACCEPTABLE MEASURES FOR CONCENTRATED FLOW PROTECTION.

B6 STORM SEWER INLET PROTECTION MEASURE LOCATIONS AND SPECIFICATIONS

REFER TO THE EROSION CONTROL PLAN SHEETS (C4.1-C4.4) FOR INLET PROTECTION MEASURES AT EXISTING AND PROPOSED STORM SEWER INLETS. REFER TO THE CONSTRUCTION DETAILS SHEET C4.5 FOR INLET PROTECTION DETAILS. STRAW BALES WILL NOT BE ALLOWED AS INLET PROTECTION MEASURES.

B7 RUNOFF CONTROL MEASURES

RUNOFF CONTROL MEASURES ARE NOT ANTICIPATED FOR THIS PROJECT.

B8 STORM WATER OUTLET PROTECTION SPECIFICATIONS

REFER TO GRADING AND DRAINAGE PLAN SHEETS C5.1 - C5.4 AND UTILITY PLAN SHEETS C6.1 - C6.4 FOR OUTLET PROTECTION SPECIFICATIONS. REFER TO CONSTRUCTION DETAIL SHEET C4.5 FOR THE RIP RAP PROTECTION OUTLET DETAIL.

B9 GRADE STABILIZATION STRUCTURE LOCATIONS AND SPECIFICATIONS

GRADE STABILIZATION STRUCTURES ARE NOT ANTICIPATED FOR THIS PROJECT.

B10 LOCATION, DIMENSIONS, SPECIFICATIONS, AND CONSTRUCTION DETAILS OF EACH STORMWATER QUALITY MEASURE

REFER TO THE EROSION CONTROL PLAN SHEETS (C4.1-C4.4) FOR THE LOCATION AND DIMENSIONS AND SPECIFICATIONS OF EACH CONSTRUCTION PHASE STORMWATER QUALITY MEASURE AND EROSION CONTROL DETAILS SHEET (C4.5) FOR SPECIFICATIONS AND DETAILS OF THE WATER QUALITY MEASURES.

B11 TEMPORARY SURFACE STABILIZATION METHODS APPROPRIATE FOR EACH SEASON

1. TEMPORARY SEEDING

1.1. TEMPORARY SEEDING IS THE PLANTING OF FAST-GROWING GRASSES TO HOLD DOWN THE SOILS IN DISTURBED AREAS SO THAT THEY ARE LESS LIKELY TO BE CARRIED OFFSITE BY STORMWATER RUNOFF OR WIND. WITHIN 14 DAYS AFTER CONSTRUCTION ACTIVITY CEASES ON ANY PARTICULAR AREA. ALL DISTURBED GROUND WHERE THERE WILL NOT BE CONSTRUCTION FOR LONGER THAN 14 DAYS MUST BE SEEDED WITH FAST-GERMINATING TEMPORARY SEED AND PROTECT WITH MULCH. IN THE EVENT OF SNOW COVER, STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE THEREAFTER. REFER TO PLANTING PLAN OR SEED CHART FOR RECOMMENDED SEED MIXTURE. 1.2. REFER TO TEMPORARY SEEDING CHART ON CONSTRUCTION DETAILS PLAN

B12 PERMANENT SURFACE STABILIZATION SPECIFICATIONS

RECOMMENDED APPLICATION RATE.

THE PURPOSE OF SOIL STABILIZATION IS TO PREVENT SOIL FROM LEAVING THE SITE. IN THE NATURAL CONDITION. SOIL IS STABILIZED BY NATIVE VEGETATION. THE PRIMARY TECHNIQUE TO BE USED AT THIS SITE FOR STABILIZING SITE SOIL WILL BE TO PROVIDE A PROTECTIVE COVER OF TURF GRASS, PAVEMENT, OR BUILDING.

1. STEPS IN INSTALLING AND MAINTAINING PERMANENT SURFACE STABILIZATION MEASURES.

SHEET (C4.5) FOR SEED MIXTURES AND MULCHING SPECIFICS.

1.1. SOIL PREPARATION - LOOSEN SOIL TO A DEPTH OF 6 INCHES. IF SOIL AMENDMENTS / FERTILIZERS ARE REQUIRED, APPLY AT MANUFACTURER'S

1.2. FERTILIZER FOR LAWNS - PROVIDE A FAST-RELEASE FERTILIZER FOR LAWN 1.3. FERTILIZER FOR TREES / SHRUBS - PROVIDE A SLOW-RELEASE GRANULAR

FERTILIZER FOR TREE / SHRUB APPLICATIONS. 1.4. REMOVE TRASH, DEBRIS, STONES LARGER THAN 1 INCH IN DIAMETER, AND OTHER OBJECTS THAT MAY INTERFERE WITH PLANT ESTABLISHMENT. FINE GRADE SOIL SURFACE TO A SMOOTH FINISH. APPLY SEED USING A SPREADER OR SEEDING MACHINE AND DO NOT SEED WHEN WIND VELOCITIES ARE IN EXCESS OF 5 MPH. WHEN SOWING, APPLY IN TWO DIRECTIONS THAT ARE

PERPENDICULAR TO EACH OTHER. 1.5. RAKE SEED LIGHTLY INTO THE TOP 1/8 INCH OF SOIL, ROLL LIGHTLY, AND WATER WITH A FINE SPRAY.

1.6. PROTECT FRESHLY SOWED SEED BY INSTALLING A LAYER OF CLEAN, SEED-FREE STRAW MULCH UNIFORMLY TO PROVIDE A BLANKET NOT LESS THAN 1½ INCHES THICK.

1.7. GENTLY WATER AREA TO KEEP STRAW MOIST UNTIL THE SEEDS HAVE ESTABLISHED.

B13 MATERIAL HANDLING AND SPILL PREVENTION PLAN

1.1. CONSTRUCTION TRAFFIC MUST ENTER AND EXIT THE SITE AT THE STABILIZED CONSTRUCTION ENTRANCE. THE PURPOSE IS TO TRAP DUST AND MUD THAT WOULD OTHERWISE BE CARRIED OFF-SITE BY CONSTRUCTION TRAFFIC. ALL DIRT TRACKED ONTO PUBLIC AND PRIVATE STREETS SHALL BE CLEANED.

2. DUST CONTROL

2.1. WATER TRUCKS WILL BE USED AS NEEDED DURING CONSTRUCTION TO REDUCE DUST GENERATED ON THE SITE. DUST CONTROL MUST BE PROVIDED BY THE GENERAL CONTRACTOR TO A DEGREE THAT IS IN COMPLIANCE WITH APPLICABLE LOCAL AND STATE DUST CONTROL REGULATIONS. AFTER CONSTRUCTION, THE SITE WILL BE STABILIZED (AS DESCRIBED ELSEWHERE), WHICH WILL REDUCE THE POTENTIAL FOR DUST GENERATION.

3. WATER SOURCE

3.1. NON-STORMWATER COMPONENTS OF SITE DISCHARGE MUST BE CLEAN WATER. WATER USED FOR CONSTRUCTION, WHICH DISCHARGES FROM THE SITE MUST ORIGINATE FROM A PUBLIC WATER SUPPLY OR PRIVATE WELL APPROVED BY THE STATE HEALTH DEPARTMENT. WATER USED FOR CONSTRUCTION THAT DOES NOT ORIGINATE FROM AN APPROVED PUBLIC SUPPLY MUST NOT DISCHARGE FROM THE SITE. IT CAN BE RETAINED IN THE PONDS UNTIL IT INFILTRATES AND EVAPORATES.

4. CONCRETE WASTE FROM CONCRETE READY-MIX TRUCKS 4.1. DISCHARGE OF EXCESS OR WASTE CONCRETE AND/OR WASH WATER FROM CONCRETE TRUCKS WILL BE ALLOWED ON THE CONSTRUCTION SITE, BUT ONLY IN SPECIFICALLY DESIGNATED DIKED AREAS THAT HAVE BEEN PREPARED TO PREVENT CONTACT BETWEEN THE CONCRETE AND/OR WASH WATER AND STORMWATER THAT WILL BE DISCHARGED FROM THE SITE OR IN LOCATIONS WHERE WASTE CONCRETE CAN BE PLACED INTO FORMS TO MAKE RIPRAP OR OTHER USEFUL CONCRETE PRODUCTS. THE CURED RESIDUE FROM THE CONCRETE WASHOUT DIKED AREAS SHALL BE DISPOSED IN ACCORDANCE WITH APPLICABLE STATE AND FEDERAL REGULATIONS. THE JOBSITE SUPERINTENDENT

IS RESPONSIBLE FOR ASSURING THAT THESE PROCEDURES ARE FOLLOWED.

5.1. TEMPORARY ON-SITE FUEL TANKS FOR CONSTRUCTION VEHICLES SHALL MEET ALL STATE AND FEDERAL REGULATIONS. TANKS SHALL HAVE APPROVED SPILL CONTAINMENT WITH THE CAPACITY REQUIRED BY THE APPLICABLE REGULATIONS. THE TANK SHALL BE IN SOUND CONDITION FREE OF RUST OR OTHER DAMAGE WHICH MIGHT COMPROMISE CONTAINMENT. HOSES, VALVES, FITTINGS. CAPS, FILLER NOZZLES, AND ASSOCIATED HARDWARE SHALL BE MAINTAINED IN PROPER WORKING CONDITION AT ALL TIMES.

6. MASONRY WASTES

6.1. CLEANING MASONRY TOOLS AND EQUIPMENT GENERATE A VARIETY OF WASTES. EXCESS CEMENT AND RINSE WATER ARE TWO EXAMPLES. SWEEP STREETS, GUTTERS, ALLEYS, AND SIDEWALKS RATHER THAN HOSING, REUSE AND RECYCLE MATERIALS IF POSSIBLE AND COLLECT AND PROPERLY DISPOSE OF

7. SANITARY FACILITIES

7.1. ALL PERSONNEL INVOLVED WITH CONSTRUCTION ACTIVITIES MUST COMPLY WITH STATE AND LOCAL SANITARY OR SEPTIC SYSTEM REGULATIONS. TEMPORARY SANITARY FACILITIES WILL BE PROVIDED AT THE SITE THROUGHOUT THE CONSTRUCTION PHASE. THEY MUST BE UTILIZED BY ALL CONSTRUCTION PERSONNEL AND WILL BE SERVICED BY A COMMERCIAL OPERATOR.

8. DUMPSTERS (LIDS AND LEAKS)

8.1. WHEN WATER ENTERS THE DUMPSTER, IT CAN PICK UP POLLUTANTS FROM THE WASTE AND LEAK OUT AND EVENTUALLY ENTER THE STORM SEWER SYSTEM. TO PREVENT THIS, DUMPSTER LIDS MUST REMAIN CLOSED AT ALL TIMES AND DUMPSTERS MUST BE INSPECTED FOR LEAKS. NEVER PLACE HAZARDOUS WASTES IN A DUMPSTER OR TRASH BIN. DO NOT HOSE OUT THE DUMPSTER INTERIOR OR LOADING DOCKS. APPLY ABSORBENT OVER ANY FLUIDS SPILLED IN THE DUMPSTER. CHECK LOADING AND UNLOADING EQUIPMENT REGULARLY

9. VEHICLE AND EQUIPMENT LEAKS

9.1. VEHICLES AND CONSTRUCTION EQUIPMENT CONTAIN VARIOUS LIQUID POLLUTANTS THAT MAY LEAK AND ENTER THE STORM SEWER SYSTEM. TO PREVENT THIS. LOOK FOR AND REPORT LEAKS ON VEHICLES WHEN ADDING FUEL. USE SECONDARY CONTAINMENT WHEN TRANSFERRING FUEL FROM THE TANK TRUCK TO THE FUEL TANK. COVER STORM DRAINS IN THE VICINITY DURING THE TRANSFER. CLEAN UP SMALL SPILLS WITH ABSORBENT MATERIALS RATHER THAN HOSING DOWN THE AREA. REMOVE THE ABSORBENT MATERIALS PROMPTLY AND DISPOSE OF IN TRASH.

10. EQUIPMENT MAINTENANCE

10.1. EQUIPMENT REQUIRES MAINTENANCE METHODS THAT CAN PRODUCE POLLUTANTS THAT WILL ENTER THE STORM SEWER SYSTEM IF NOT PROPERLY CLEANED. KEEP ACCURATE MAINTENANCE LOGS AND UP TO DATE INVENTORY OF MATERIALS. PERFORM MAINTENANCE IN COVERED, DESIGNATED SERVICE BAYS WHERE SPILLS AND LEAKS CAN BE PROPERTY CONTAINED. RECYCLE SPENT FLUIDS - DO NOT DUMP DOWN THE DRAIN OR IN THE TRASH. AVOID HOSING DOWN WORK AREAS - USE RAGS FOR SMALL SPILLS, A DAMP MOP FOR GENERAL CLEANUP, AND DRY ABSORBENT FOR LARGER SPILLS.

11. CHEMICALS USED IN CONSTRUCTION

11.1. THE CONSTRUCTION PROCESS REQUIRES THE USE OF MANY CHEMICALS INCLUDING PAINT, SOLVENTS, AND FERTILIZERS. IT IS IMPORTANT TO HANDLE THESE CHEMICALS APPROPRIATELY TO PREVENT CONTAMINATION OF THE STORM SEWER SYSTEM. FIT OIL AND CHEMICAL STORAGE CONTAINERS WITH SECONDARY CONTAINMENT STRUCTURES TO CONTAIN SPILLED MATERIALS. IT IS PREFERABLE TO STORE MATERIALS INDOORS BUT IF THERE IS ONLY AN OUTDOOR STORAGE AREA AVAILABLE, KEEP MATERIALS COVERED TO PREVENT RAIN FROM CONTACTING THE MATERIAL COVER AND/OR CONTAIN STOCKPILES OR RAW MATERIALS (I.E. SALT, SOIL) TO PREVENT POLLUTED STORMWATER

12. SPILL CLEANUP PROCEDURES

12.1. IF A SPILL OCCURS, NOTIFY THE KEY SPILL RESPONSE PERSONNEL. IF THE MATERIAL IS HAZARDOUS, CONTACT THE LOCAL FIRE DEPARTMENT. NEVER WASH A SPILL INTO THE STORM DRAIN OR LEAVE IT WITHOUT CLEANING IT UP. CONTAIN SPILLS AND BLOCK THE NEARBY STORM DRAIN. CLEAN UP NON-HAZARDOUS SPILLS BY USING A RAG, DAMP CLOTH, OR ABSORBENT

12.2. IN CASE OF HAZARDOUS MATERIAL SPILLS, CONTACT THE CORRESPONDING AGENCY. THE INDIANA DEPARTMENT OF ENVIRONMENTAL SPILL RESPONSE LINE CAN BE CONTACTED 24 HOURS-A-DAY, 7 DAYS-A-WEEK AT (317) 233-7745, OR CALL 911.

B14 MONITORING AND MAINTENANCE GUIDELINES FOR EACH PROPOSED STORMWATER QUALITY

INSPECTION SCHEDULE / REPORTING

1. ALL DISTURBED AREAS WITHIN THE PROJECT SITE, INCLUDING ALL EROSION AND SEDIMENT CONTROL DEVICES, SHALL BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS AFTER A RAINFALL EVENT TOTALING $\frac{1}{2}$ " OF RAIN OR MORE.

INSPECTIONS AND WRITTEN REPORTS SHALL BE PREPARED BY A QUALIFIED PERSON WHO IS FAMILIAR WITH THIS SWPPP, THE PROJECT, AND THE EPA NPDES STORM WATER GENERAL PERMIT. PAPER COPIES OF INSPECTIONS SHALL BE KEPT ON-SITE FOR INSPECTION BY LOCAL AND STATE OFFICIALS.

3. INSPECTION REPORTS SHALL INCLUDE:

4.1. VERIFY ADEQUATE STONE COVERAGE

5.2. VERIFY FLUID IS NOT LEAKING FROM THE AREA

3.1. TYPE OF INSPECTION

3.2. FIELD OBSERVATIONS 3.3. ACTIONS TAKEN AS A RESULT OF INSPECTION RESULTS

3.4. OVERALL ASSESSMENT OF SWPPP COMPLIANCE 3.5. THE CONTRACTOR SHALL KEEP A COPY OF THE REPORTS ONSITE AND PERMANENTLY FOR A PERIOD OF 2 YEARS FOLLOWING CONSTRUCTION.

4. CONSTRUCTION ENTRANCE

4.2. VERIFY CONSTRUCTION ACTIVITIES ARE NOT TRACKING SITE SOIL OUT ONTO ADJACENT ROADWAYS

5. MATERIAL STORAGE 5.1. VERIFY MATERIAL STORAGE AREAS ARE PROTECTED FROM RAINFALL

CONTROL MEASURE:

PROPER OPERATION

5.3. OFFSITE STORAGE AREAS ARE TO BE CONSIDERED PART OF THE PROJECT

6. SOIL STABILIZATION 6.1. VERIFY THAT SEEDED AREAS EXHIBIT HEALTHY PLANT ESTABLISHMENT 6.2. THE SITE HAS ACHIEVED FINAL STABILIZATION ONCE ALL AREAS ARE EITHER

COVERED BY PAVEMENT OR HAVE REACHED 70% OF THE VEGETATION DENSITY. THIS VEGETATION DENSITY MUST BE MAINTAINED IN ORDER TO REMAIN

CATEGORIZED AS FINAL STABILIZATION. MEASURES MUST BE TAKEN TO REACH

THIS LEVEL IF STANDARD PROCEDURES DO NOT YIELD ADEQUATE PLANT ESTABLISHMENT. 7. EROSION AND SEDIMENT CONTROL INSPECTIONS - THE FOLLOWING IS A LIST OF

INSPECTION / MAINTENANCE PRACTICES THAT SHOULD BE CONDUCTED FOR EACH

8. GEOTEXTILES/EROSION CONTROL MATS - MISSING / LOOSE MATS SHALL BE

REPLACED AND REINSTALLED PER MANUFACTURER'S RECOMMENDATION. 8.1. INLET PROTECTION - INLET PROTECTION MEASURES SHALL BE ROUTINELY INSPECTED AND ACCUMULATED SEDIMENT SHALL BE REMOVED TO ENSURE

HYDRAULIC CAPACITY OF THE SWALE. 8.3. MULCHING - APPLY ADDITIONAL MULCH TO SPARSE OR BARE SPOTS.

8.2. DIVERSION SWALES - REMOVE ACCUMULATED DEBRIS THAT REDUCES THE

8.4. SEDIMENT TRAP — REMOVE ACCUMULATED SEDIMENT TO ENSURE PROPER OPERATION 8.5. SEDIMENT BASIN — REMOVE ACCUMULATED SEDIMENT TO ENSURE PROPER

8.6. SILT FENCE - REMOVE ACCUMULATED SEDIMENT THAT POSES A THREAT TO THE STABILITY OF THE FENCE ($\frac{1}{3}$ HEIGHT OF FENCE). 8.7. CONSTRUCTION ENTRANCE - REDRESS ENTRANCE WITH ADDITIONAL STONE

PERIODICALLY TO MAINTAIN FUNCTIONALITY. 8.8. STRAW BALES - REPLACE BALES THAT SHOW SIGNS OF DEGRADATION. 8.9. VEGETATION - ENSURE NEWLY SEEDED AREAS ARE PROTECTED FROM EROSION. 8.10. GOOD HOUSEKEEPING - VERIFY THAT LITTER, MISCELLANEOUS CONSTRUCTION DEBRIS, CONSTRUCTION RELATED CHEMICALS, AND OTHER POTENTIALLY HARMFUL MATERIALS ARE PROPERLY STORED, COVERED, AND/OR DO NOT

9. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, DOWNSTREAM SEDIMENT MUST BE REMOVED IMMEDIATELY TO REDUCE THE RISK OF ADVERSE IMPACTS.

HAVE THE POTENTIAL TO ENTER THE STORM SEWER SYSTEM.

10. BASED ON THE ACTUAL CONDITIONS OBSERVED ONSITE, ANY NECESSARY MODIFICATIONS TO THE PROJECT SWPPP SHALL BE IMPLEMENTED WITHIN 7 CALENDAR DAYS OF THE INSPECTION. ALL MODIFICATIONS TO THE SWPPP SHALL BE RECORDED BY THE CONTRACTOR AND SHALL BE PROVIDED UPON REQUEST.

11. IT IS THE OPERATOR'S SOLE RESPONSIBILITY TO ENSURE THE EROSION AND SEDIMENT CONTROL MEASURES ONSITE ARE SUFFICIENT TO MEET THE REQUIREMENTS OF THE EPA NPDES STORM WATER DISCHARGE PERMIT. IF ADDITIONAL MEASURES ARE REQUIRED, THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING SUCH MEASURES.

NOTICE OF TERMINATION (NOT)

12. COMPLIANCE WITH THE GENERAL CONSTRUCTION PERMIT IS THE RESPONSIBILITY OF THE OPERATOR / PERMITTEE WHO SUBMITTED THE NOI UNTIL A NOTICE OF TERMINATION (NOT) HAS BEEN PROCESSED. THE PERMITTEE'S AUTHORIZATION TO DISCHARGE UNDER THE GENERAL CONSTRUCTION PERMIT TERMINATES AT MIDNIGHT

OF THE DAY THE NOT IS SIGNED. 13. ALL PERMITTEES MUST SUBMIT AN NOT WITHIN 30 DAYS AFTER ONE OR MORE OF THE FOLLOWING CONDITIONS HAVE BEEN MET: 13.1. FINAL STABILIZATION HAS BEEN ACHIEVED ONSITE

13.2. ANOTHER OPERATOR / PERMITTEE HAS ASSUMED CONTROL OVER THE AREAS

13.3. IN RESIDENTIAL CONSTRUCTION OPERATIONS, TEMPORARY STABILIZATION HAS

BEEN COMPLETED AND THE RESIDENCE HAS BEEN TRANSFERRED TO THE HOMEOWNER.

OF THE SITE THAT HAVE YET TO ACHIEVE FINAL STABILIZATION

SINCE THE ENTIRE PROJECT SITE IS UNDER THE SAME OWNER, THERE ARE NOT ANY INDIVIDUAL BUILDING LOTS SPECIFICATIONS.

B15 EROSION & SEDIMENT CONTROL SPECIFICATIONS FOR INDIVIDUAL BUILDING LOTS

SWPPP - POST CONSTRUCTION - SECTION C

C1 DESCRIPTION OF POLLUTANTS AND THEIR SOURCES ASSOCIATED WITH THE PROPOSED

POTENTIAL POLLUTANTS GENERATED DUE TO THIS BUILDING PROJECT INCLUDE: 1. LITTER FROM USERS.

2. AUTOMOBILE FLUIDS FROM VEHICLES USING THE PAVED AREAS OF THE SITE. SEDIMENT.

C2 SEQUENCE DESCRIBING STORMWATER QUALITY MEASURE IMPLEMENTATION

THE EXISTING POND 1 AND POND 2 WILL BE PROVIDING THE STORMWATER QUALITY FOR THE PROJECT SITE. THE ALTERATIONS TO POND 1 AND POND 2 WILL BE CONSTRUCTED AT THE BEGINNING OF WORK DURING MASS GRADING OPERATIONS, AND STORMWATER WILL IMMEDIATELY ROUTE THROUGH SAID DETENTION PRIOR TO DISCHARGING OFFSITE TO THE SOUTHEAST TO THE HOUGHAM LEGAL DRAIN.

C3 DESCRIPTION OF PROPOSED POST-CONSTRUCTION STORMWATER QUALITY MEASURES

TREATMENT FOR THE SITE.

POND 1 AND POND 2 WILL BE PROVIDING POST-CONSTRUCTION STORMWATER QUALITY

C4 LOCATION, DIMENSIONS, SPECIFICATIONS, AND CONSTRUCTION DETAILS OF EACH STORMWATER QUALITY MEASURE

POND 2 IS LOCATED ON THE NORTH EAST PORTION OF THE SITE. POND 1 IS LOCATED ON THE SOUTH SIDE OF THE SITE.

QUALITY MEASURES

C5 DESCRIPTION OF MAINTENANCE GUIDELINES FOR POST-CONSTRUCTION STORMWATER

SIDE SLOPES OF POND 1 AND POND 2 SHALL BE REGULARLY INSPECTED TO ENSURE THE

TURF VEGETATION IS FULLY ESTABLISHED AND THE OUTLET STRUCTURES/FLARED END

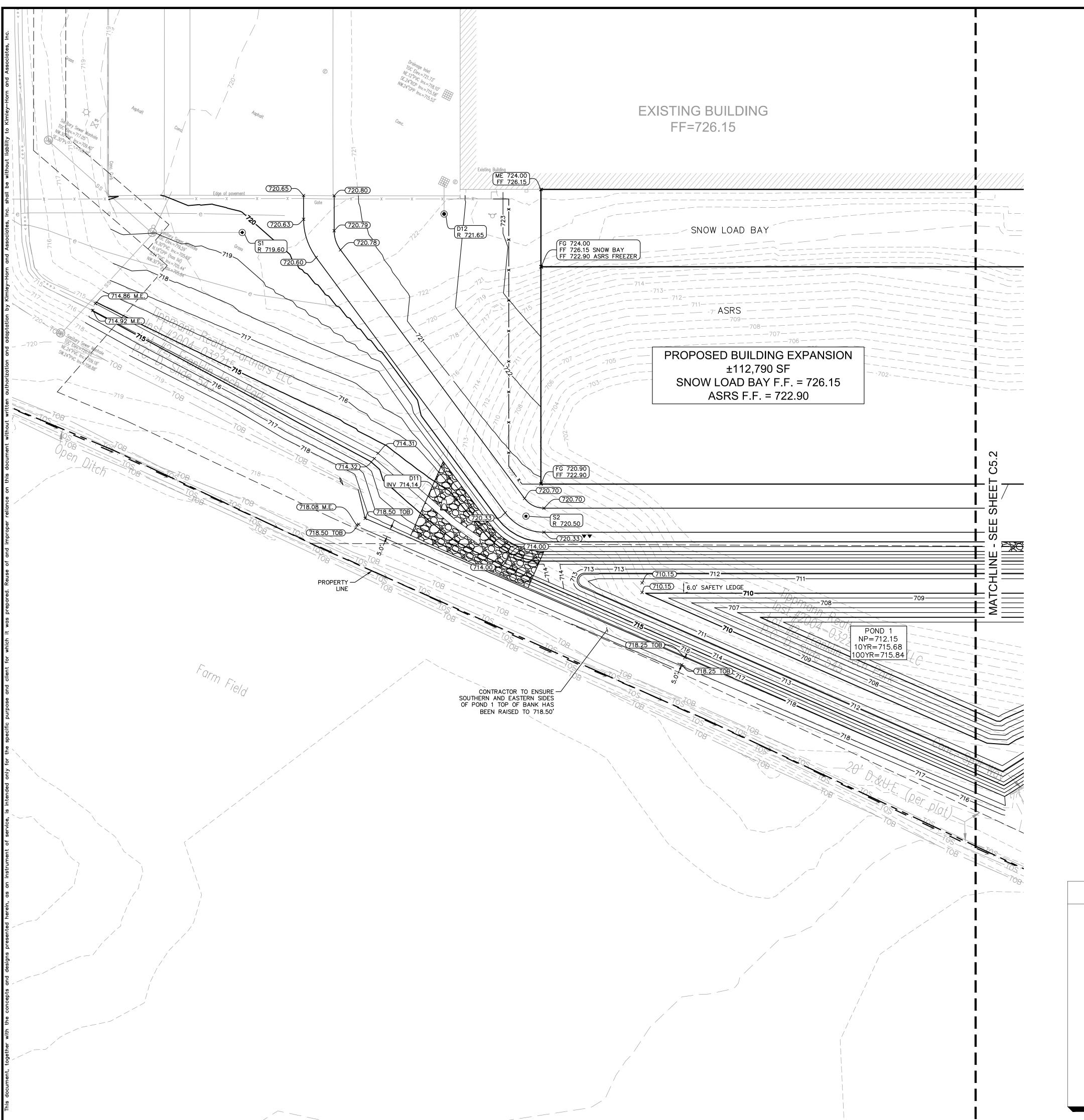
SECTIONS ARE CLEAR OF DEBRIS AND IN PROPER OPERATION.

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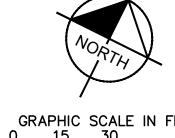
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SHEET NUMBER









GRAPHIC SCALE IN FEET

GRADING NOTES

- CONTRACTOR TO VERIFY ALL EXISTING TOPOGRAPHY AND STRUCTURES ON THE SITE AND IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING WORK.
- ALL PAVEMENT SPOT GRADE ELEVATIONS AND RIM ELEVATIONS WITHIN OR ALONG CURB AND GUTTER REFER TO EDGE OF PAVEMENT ELEVATIONS UNLESS OTHERWISE NOTED.
- ALL ELEVATIONS SHOWN DEPICT FINISHED GRADE OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED. GENERAL CONTRACTOR TO COORDINATE WITH EXCAVATION, LANDSCAPE AND PAVING SUBCONTRACTORS REGARDING TOPSOIL THICKNESS FOR LANDSCAPE AREAS AND PAVEMENT SECTION THICKNESS FOR PAVED AREAS TO PROPERLY ENSURE ADEQUATE CUT TO ESTABLISH SUBGRADE ELEVATIONS.
- 4. NO EARTHEN SLOPE SHALL BE GREATER THAN 3:1, UNLESS OTHERWISE NOTED. 5. MAXIMUM SLOPE IN ACCESSIBLE PARKING SPACES AND LOADING ZONES SHALL NOT EXCEED 2.0% IN ALL DIRECTIONS.
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- 7. WHEN NATURAL FLOW OF DRAINAGE IS AWAY FROM CURB, CONTRACTOR TO INSTALL REVERSE GUTTER PITCH.
- 8. MATCH EXISTING ELEVATIONS AT THE PROPERTY LIMITS.

UTILITY LEGEND

EX. HYDRANT EX. WATER VALVE EX. SANITARY SEWER MANHOLE EX. SANITARY SEWER CLEANOUT EX. STORM MANHOLE EX. STORM CATCH BASIN/INLET EX. GAS METER EX. LIGHT POLE PROPOSED STORM STRUCTURE PROPOSED SANITARY MANHOLE PROPOSED SANITARY CLEANOUT PROPOSED WATER STRUCTURE

GRADING LEGEND

EP = EDGE OF PAVEMENT

PROPOSED LIGHT POLE

FL = FLOW LINE/PAVEMENT GRADE

TC = TOP OF CURBME = MATCH ELEVATION

FF = FINISHED FLOOR

R = RIM ELEVATION

TW = TOP OF WALL

FG = FINISHED GRADE

TS = TOP OF STAIRS

BS = BOTTOM OF STAIRS

PROPOSED CONTOUR RIDGE LINE

SLOPE AND FLOW DIRECTION

100-YEAR OVERLAND OVERFLOW ROUTE

DETENTION BASIN 100-YEAR EMERGENCY OVERLAND OVERFLOW ROUTE

PROPOSED SWALE

PROPOSED RETAINING WALL

BENCHMARKS

SITE BENCHMARKS: (LOCATIONS SHOWN ON SURVEY)

-----620-----

<u>X.</u>XX%

TBM#2 SE CORNER, SW 1 SECT. 20-T12N-R5E MAG NAIL FOUND (JOHNSON COUNTY SURVEYOR) ELEVATION=711.36

KEY MAP

ORIGINAL ISSUE: 05/09/19 KHA PROJECT NO. 170021004 SHEET NUMBER

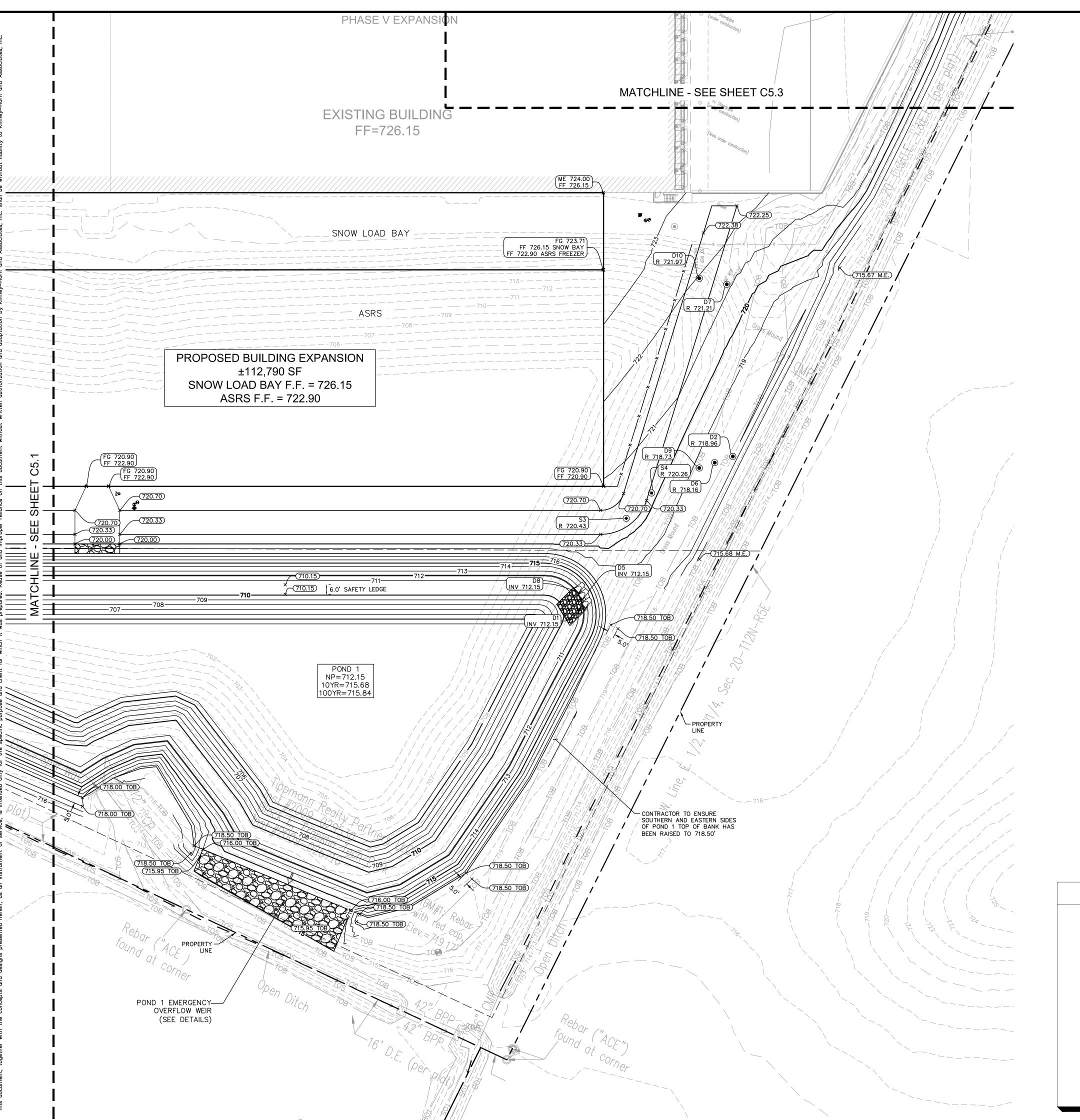
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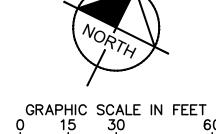
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FRANKLIN IWI PHA 7A EXPANSION

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Kimley » Horn

GRADING NOTES

- CONTRACTOR TO VERIFY ALL EXISTING TOPOGRAPHY AND STRUCTURES ON THE SITE AND IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING WORK.
- ALL PAVEMENT SPOT GRADE ELEVATIONS AND RIM ELEVATIONS WITHIN OR ALONG CURB AND GUTTER REFER TO EDGE OF PAVEMENT ELEVATIONS UNLESS OTHERWISE NOTED.
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 MATCH EXISTING ELEVATIONS AT THE PROPERTY LIMITS.

UTILITY LEGEND

EX. HYDRANT

EX. WATER VALVE

EX. SANITARY SEWER MANHOLE

EX. SANITARY SEWER CLEANOUT

EX. STORM MANHOLE

EX. STORM CATCH BASIN/INLET

EX. GAS METER

EX. LIGHT POLE

PROPOSED STORM STRUCTURE

PROPOSED SANITARY MANHOLE

PROPOSED SANITARY MANHOLE

PROPOSED SANITARY CLEANOUT

PROPOSED WATER STRUCTURE

PROPOSED LIGHT POLE

GRADING LEGEND

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TS = TOP OF STAIRS

BS = BOTTOM OF STAIRS

PROPOSED CONTOUR

PROPOSED CONTOUR

RIDGE LINE

SLOPE AND FLOW DIRECTION

100-YEAR OVERLAND OVERFLOW ROUTE

DETENTION BASIN 100-YEAR EMERGENCY

OVERLAND OVERFLOW ROUTE

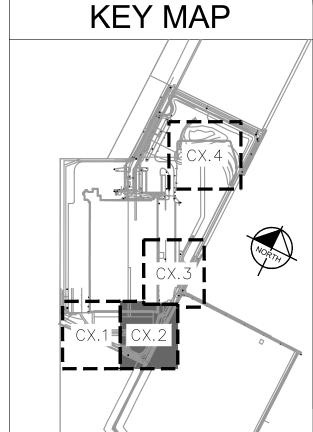
PROPOSED SWALE

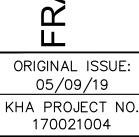
PROPOSED RETAINING WALL

BENCHMARKS

SITE BENCHMARKS: (LOCATIONS SHOWN ON SURVEY)

TBM#2 SE CORNER, SW¹/₄ SECT. 20-T12N-R5E MAG NAIL FOUND (JOHNSON COUNTY SURVEYOR)
ELEVATION=711.36





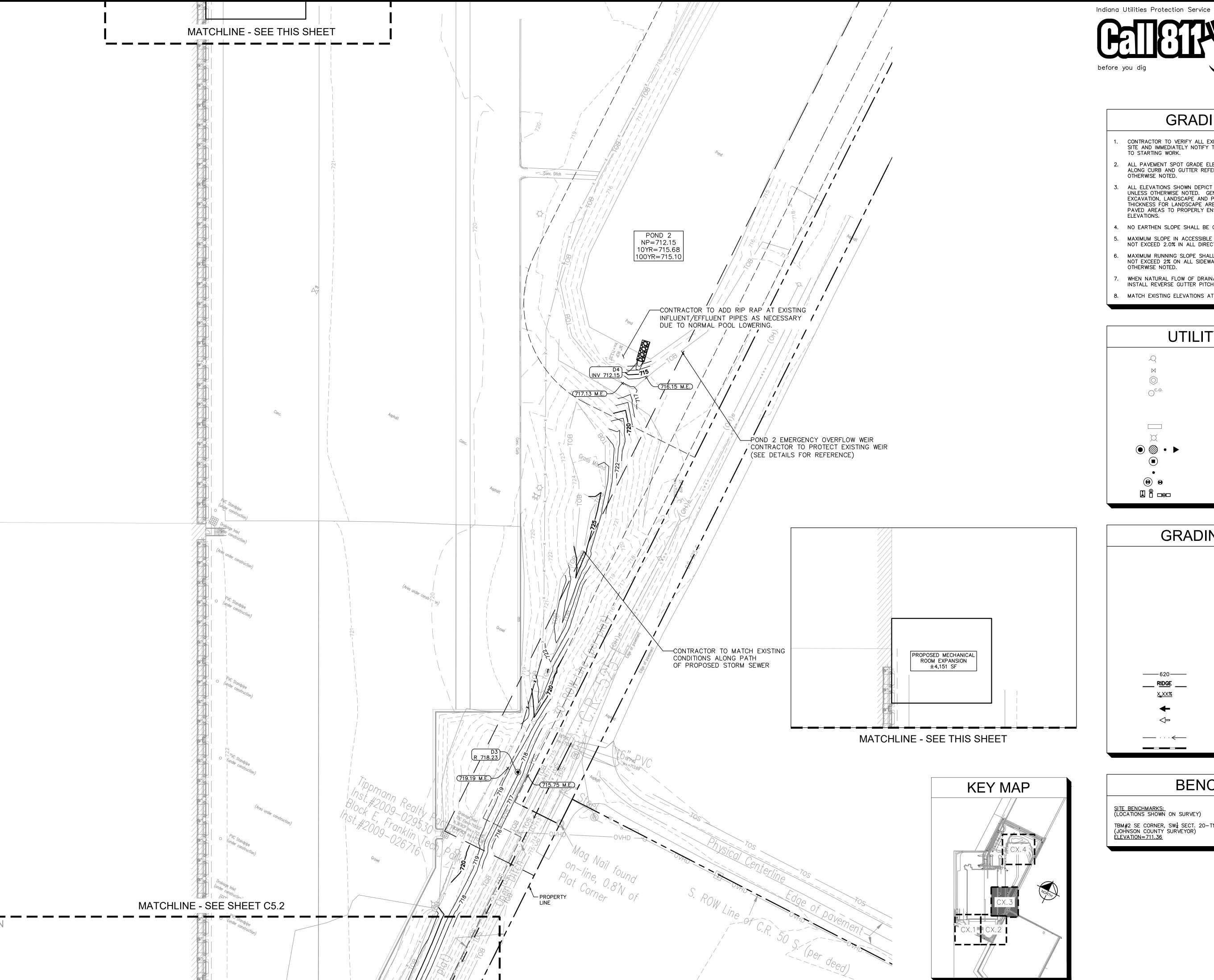
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SHEET NUMBER

C5.2







GRAPHIC SCALE IN FEET

GRADING NOTES

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EX. HYDRANT EX. WATER VALVE EX. SANITARY SEWER MANHOLE EX. SANITARY SEWER CLEANOUT EX. STORM MANHOLE EX. STORM CATCH BASIN/INLET EX. GAS METER EX. LIGHT POLE ● ◎ • ► PROPOSED STORM STRUCTURE PROPOSED SANITARY MANHOLE

> PROPOSED SANITARY CLEANOUT PROPOSED WATER STRUCTURE PROPOSED LIGHT POLE

GRADING LEGEND

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PROPOSED CONTOUR RIDGE LINE <u>X.</u>XX% SLOPE AND FLOW DIRECTION

> 100-YEAR OVERLAND OVERFLOW ROUTE DETENTION BASIN 100-YEAR EMERGENCY OVERLAND OVERFLOW ROUTE

PROPOSED SWALE PROPOSED RETAINING WALL

BENCHMARKS

SITE BENCHMARKS: (LOCATIONS SHOWN ON SURVEY)

TBM#2 SE CORNER, SW 1 SECT. 20-T12N-R5E MAG NAIL FOUND (JOHNSON COUNTY SURVEYOR) ELEVATION=711.36

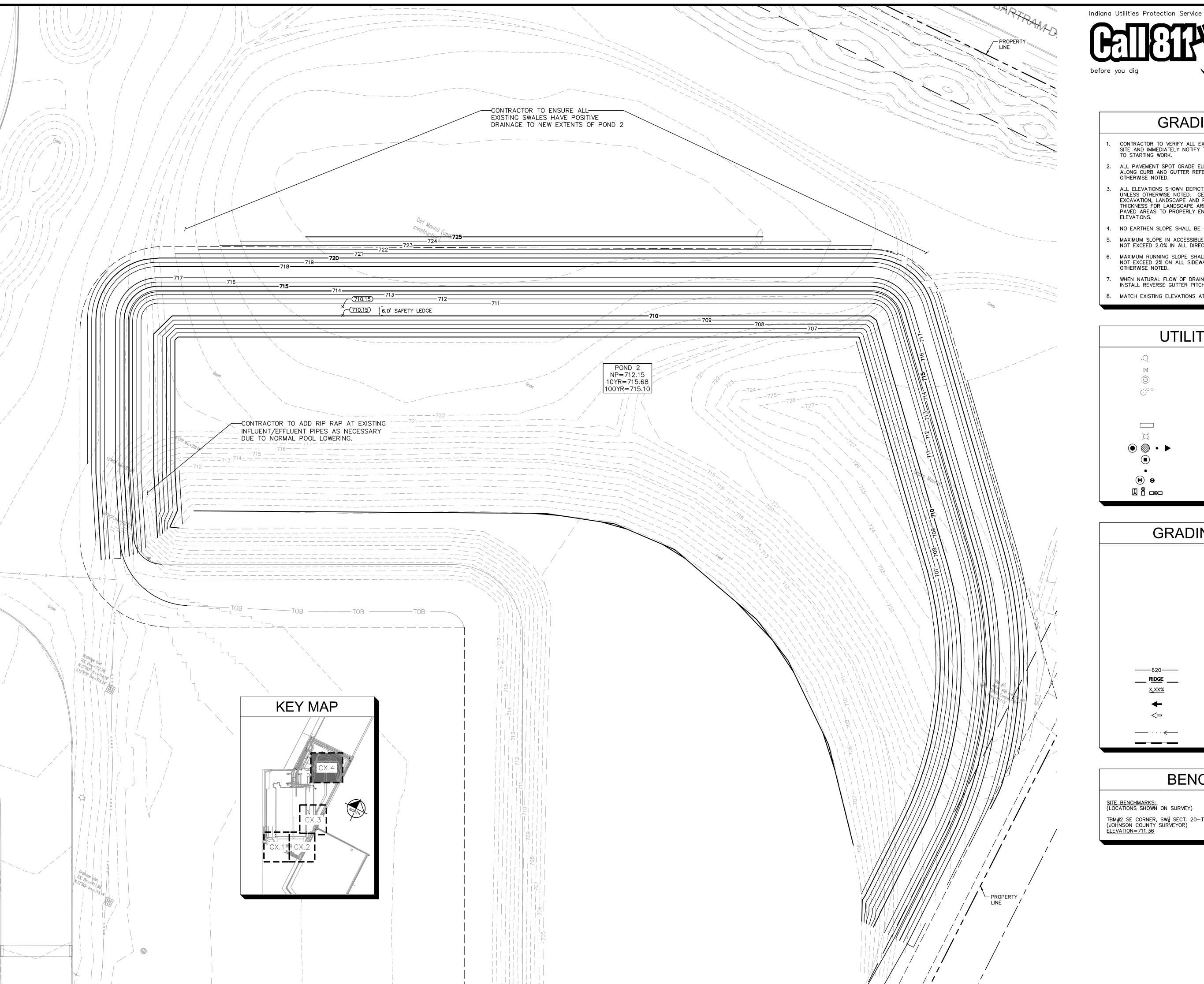
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ORIGINAL ISSUE: 05/09/19 KHA PROJECT NO. 170021004

SHEET NUMBER

C5.3







GRAPHIC SCALE IN FEET

GRADING NOTES

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8. MATCH EXISTING ELEVATIONS AT THE PROPERTY LIMITS.

UTILITY LEGEND

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PROPOSED SANITARY MANHOLE PROPOSED SANITARY CLEANOUT PROPOSED WATER STRUCTURE PROPOSED LIGHT POLE

GRADING LEGEND

EP = EDGE OF PAVEMENT

FL = FLOW LINE/PAVEMENT GRADE

PROPOSED STORM STRUCTURE

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PROPOSED CONTOUR RIDGE LINE

SLOPE AND FLOW DIRECTION

100-YEAR OVERLAND OVERFLOW ROUTE

DETENTION BASIN 100-YEAR EMERGENCY OVERLAND OVERFLOW ROUTE

PROPOSED SWALE

PROPOSED RETAINING WALL

BENCHMARKS

SITE BENCHMARKS: (LOCATIONS SHOWN ON SURVEY) TBM#2 SE CORNER, SW[‡] SECT. 20-T12N-R5E MAG NAIL FOUND (JOHNSON COUNTY SURVEYOR)
<u>ELEVATION=711.36</u> FRANKLIN IWI PHA 7A EXPANSION

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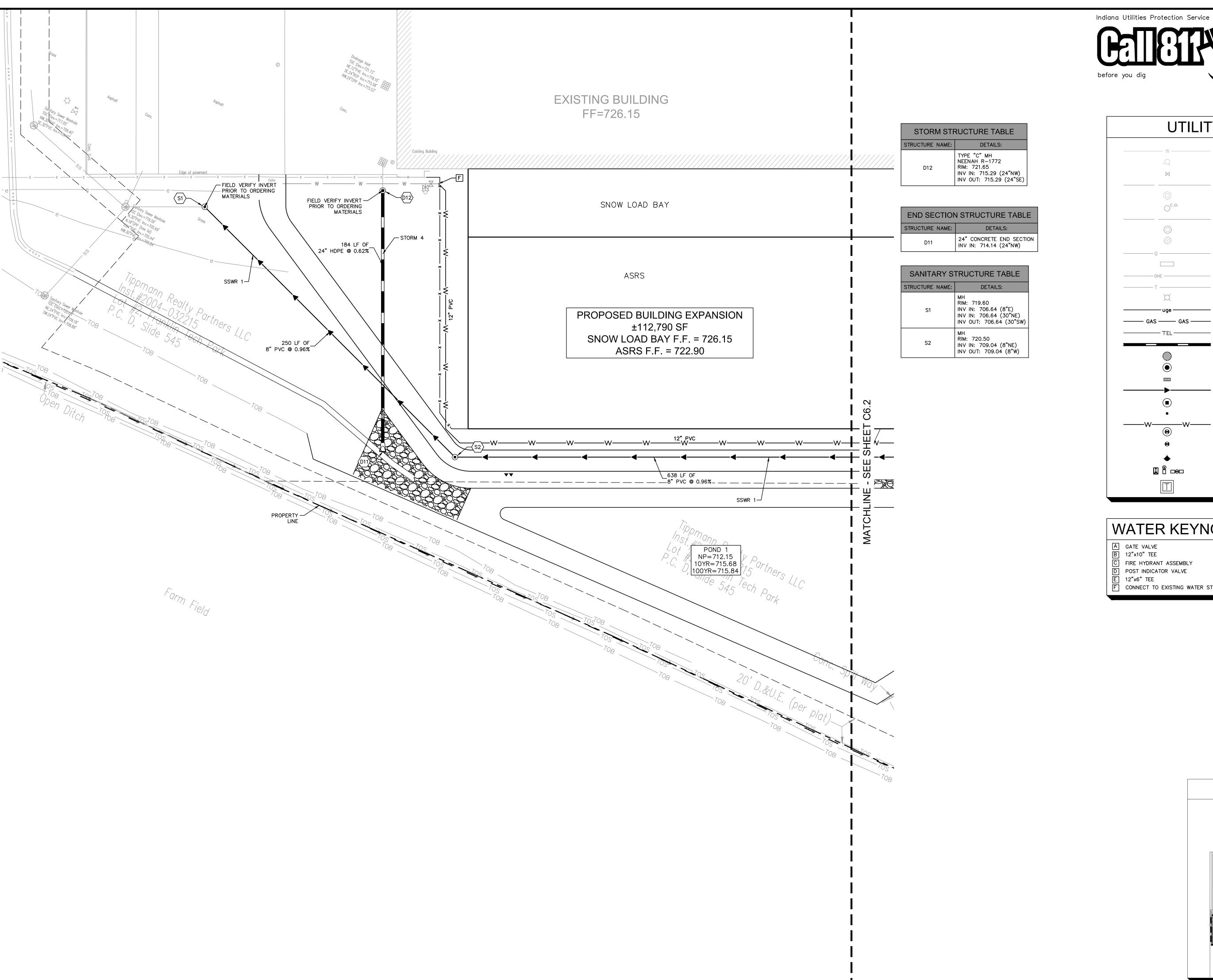
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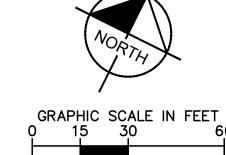
ORIGINAL ISSUE: 05/09/19 KHA PROJECT NO. 170021004

SHEET NUMBER

C5.4







PROPOSED TRANSFORMER PAD (BY OTHERS)

KEY MAP

| UTILITY | LEGEND |
|-------------------|-------------------------------------|
| | EX. WATER LINE |
| Q | EX. HYDRANT |
| \bowtie | EX. WATER VALVE |
| | EX. SANITARY SEWER LINE |
| | EX. SANITARY SEWER MANHOLE |
| ⊙ ^{c.o.} | EX. SANITARY SEWER CLEANOUT |
| | EX. STORM DRAIN LINE |
| | EX. STORM MANHOLE |
| | EX. STORM STRUCTURE/INLET |
| G | EX. GAS LINE |
| | EX. GAS METER |
| OHE | EX. UNDERGROUND ELECTRIC LINE |
| т | EX. UNDERGROUND TELEPHONE LINE |
| X | EX. LIGHT POLE |
| uge | PROPOSED UNDERGROUND ELECTRIC LINE |
| ——— GAS ——— | GAS LINE (BY GAS COMPANY) |
| TEL | PROPOSED PHONE LINE |
| | PROPOSED STORM SEWER LINE |
| | PROPOSED OPEN LID STORM STRUCTURE |
| | PROPOSED CLOSED LID STORM STRUCTURE |
| <u> </u> | PROPOSED OPEN LID CURB STRUCTURE |
| | PROPOSED SANITARY SEWER LINE |
| | PROPOSED SANITARY MANHOLE |
| • | PROPOSED STORM/SANITARY CLEANOUT |
| | PROPOSED WATER LINE |
| ® | PROPOSED VALVE VAULT |
| • | PROPOSED VALVE BOX |
| • | PROPOSED FIRE HYDRANT |
| | PROPOSED LIGHT POLE |

WATER KEYNOTES

D POST INDICATOR VALVE

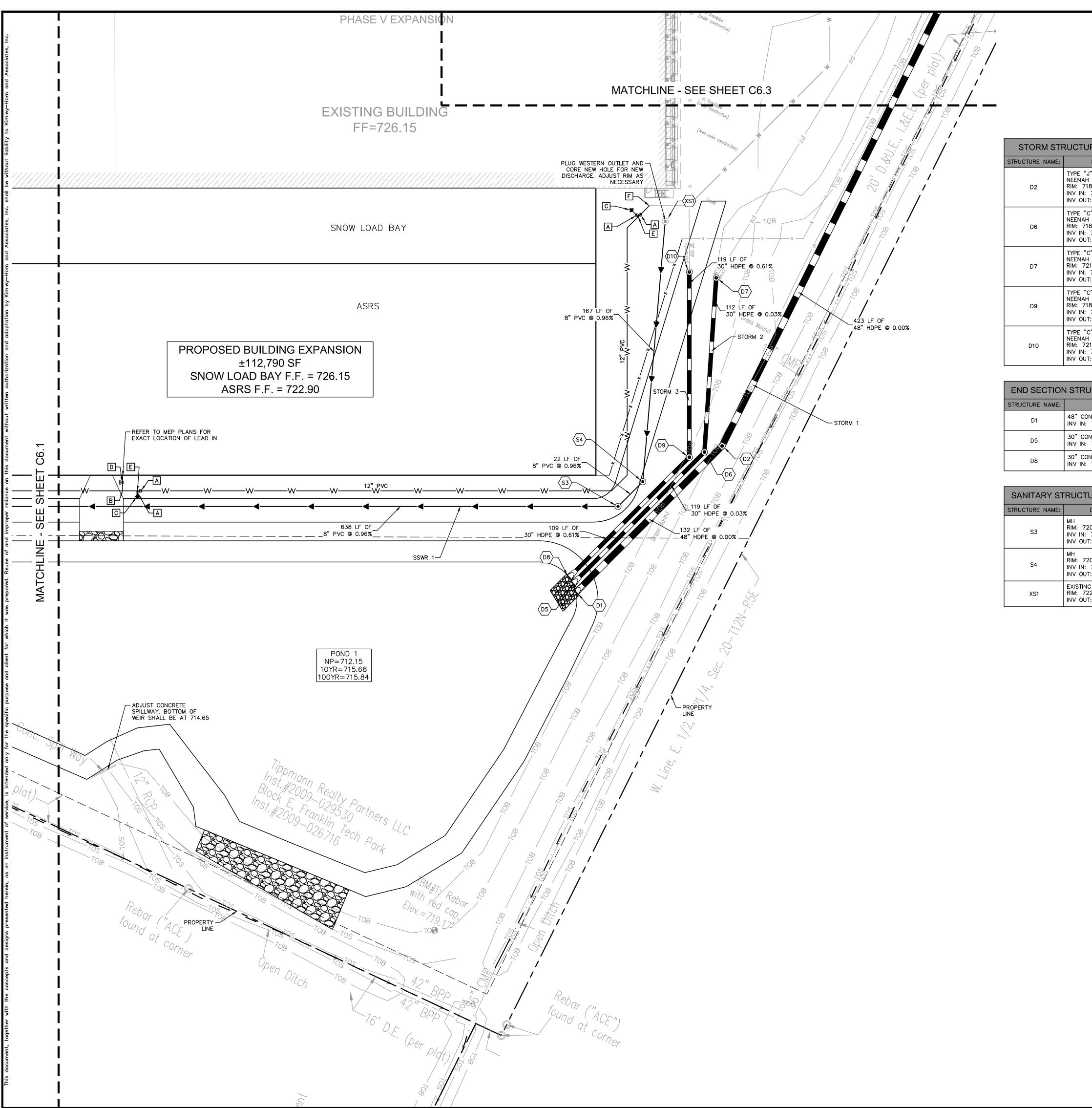
E 12"x6" TEE
F CONNECT TO EXISTING WATER STUB



Kimley » Horn

FRANKLIN IWI PHASE 7A EXPANSION

ORIGINAL ISSUE: 05/09/19 KHA PROJECT NO. 170021004 SHEET NUMBER







Kimley » Horn

| (| | ALE IN | FEET 6 |
|---|--|--------|-----------|
| | | | |

| F | RUCTURE TABLE | | | |
|---|--|----|--|--|
| | DETAILS: | | | |
| | TYPE "J" MH NEENAH R-1772 RIM: 718.96 INV IN: 712.15 (48"N) INV OUT: 712.15 (48"S) | | | |
| | TYPE "C" MH NEENAH R-1772 RIM: 718.16 INV IN: 712.19 (30"NW) INV OUT: 712.19 (30"S) | | | |
| | TYPE "C" MH NEENAH R-1772 RIM: 721.21 INV IN: 712.22 (30"N) INV OUT: 712.22 (30"SE) | | | |
| | TYPE "C" MH NEENAH R-1772 RIM: 718.73 INV IN: 712.81 (30"NW) INV OUT: 712.81 (30"S) | | | |
| | TYPE "C" MH NEENAH R-1772 RIM: 721.97 INV IN: 713.53 (30"NW) INV OUT: 713.53 (30"SE) | | | |
| | | | | |
| 1 | N STRUCTURE TABL | Ξ | | |
| | DETAILS: | | | |
| | 48" CONCRETE END SECTION | ON | | |

| END SECTION STRUCTURE TABLE | | | | | |
|-----------------------------|--|--|--|--|--|
| RUCTURE NAME: | DETAILS: | | | | |
| D1 | 48" CONCRETE END SECTION INV IN: 712.15 (48"N) | | | | |
| D5 | 30" CONCRETE END SECTION INV IN: 712.15 (30"N) | | | | |
| D8 | 30" CONCRETE END SECTION INV IN: 712.15 (30"N) | | | | |
| · | | | | | |

| SANITARY STRUCTURE TABLE | | | | |
|--------------------------|---|--|--|--|
| STRUCTURE NAME: | DETAILS: | | | |
| \$3 | MH RIM: 720.43 INV IN: 715.15 (8"N) INV OUT: 715.15 (8"SW) | | | |
| S4 | MH RIM: 720.26 INV IN: 715.37 (8"N) INV OUT: 715.37 (8"S) | | | |
| XS1 | EXISTING MH RIM: 722.80 INV OUT: 716.97 (8"S) | | | |

| UTILITY LEG | GENI |
|-------------|------|
|-------------|------|

| —————————————————————————————————————— | EX. WATER LINE |
|--|--------------------------------------|
| Q | EX. HYDRANT |
| × | EX. WATER VALVE |
| | EX. SANITARY SEWER LINE |
| \bigcirc | EX. SANITARY SEWER MANHOLE |
| ○c.o. | EX. SANITARY SEWER CLEANOUT |
| | EX. STORM DRAIN LINE |
| | EX. STORM MANHOLE |
| | EX. STORM STRUCTURE/INLET |
| G | EX. GAS LINE |
| | EX. GAS METER |
| OHE | EX. UNDERGROUND ELECTRIC LINE |
| т | EX. UNDERGROUND TELEPHONE LINE |
| × | EX. LIGHT POLE |
| uge | PROPOSED UNDERGROUND ELECTRIC LINE |
| ——— GAS ——— GAS ——— | GAS LINE (BY GAS COMPANY) |
| TEL | PROPOSED PHONE LINE |
| | PROPOSED STORM SEWER LINE |
| | PROPOSED OPEN LID STORM STRUCTURE |
| lacktriangle | PROPOSED CLOSED LID STORM STRUCTURE |
| | PROPOSED OPEN LID CURB STRUCTURE |
| | PROPOSED SANITARY SEWER LINE |
| | PROPOSED SANITARY MANHOLE |
| • | PROPOSED STORM/SANITARY CLEANOUT |
| | PROPOSED WATER LINE |
| (9) | PROPOSED VALVE VAULT |
| • | PROPOSED VALVE BOX |
| • | PROPOSED FIRE HYDRANT |
| | PROPOSED LIGHT POLE |
| | PROPOSED TRANSFORMER PAD (BY OTHERS) |
| | |

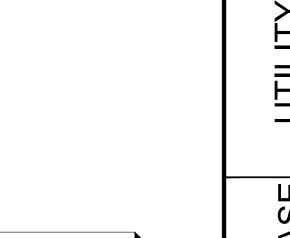
WATER KEYNOTES

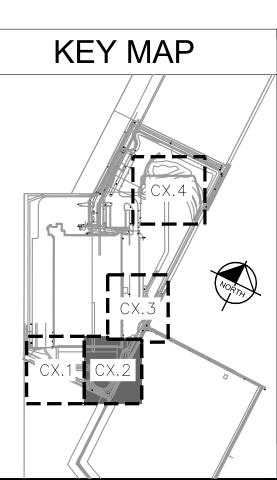
D POST INDICATOR VALVE

A GATE VALVE
B 12"x10" TEE

FIRE HYDRANT ASSEMBLY

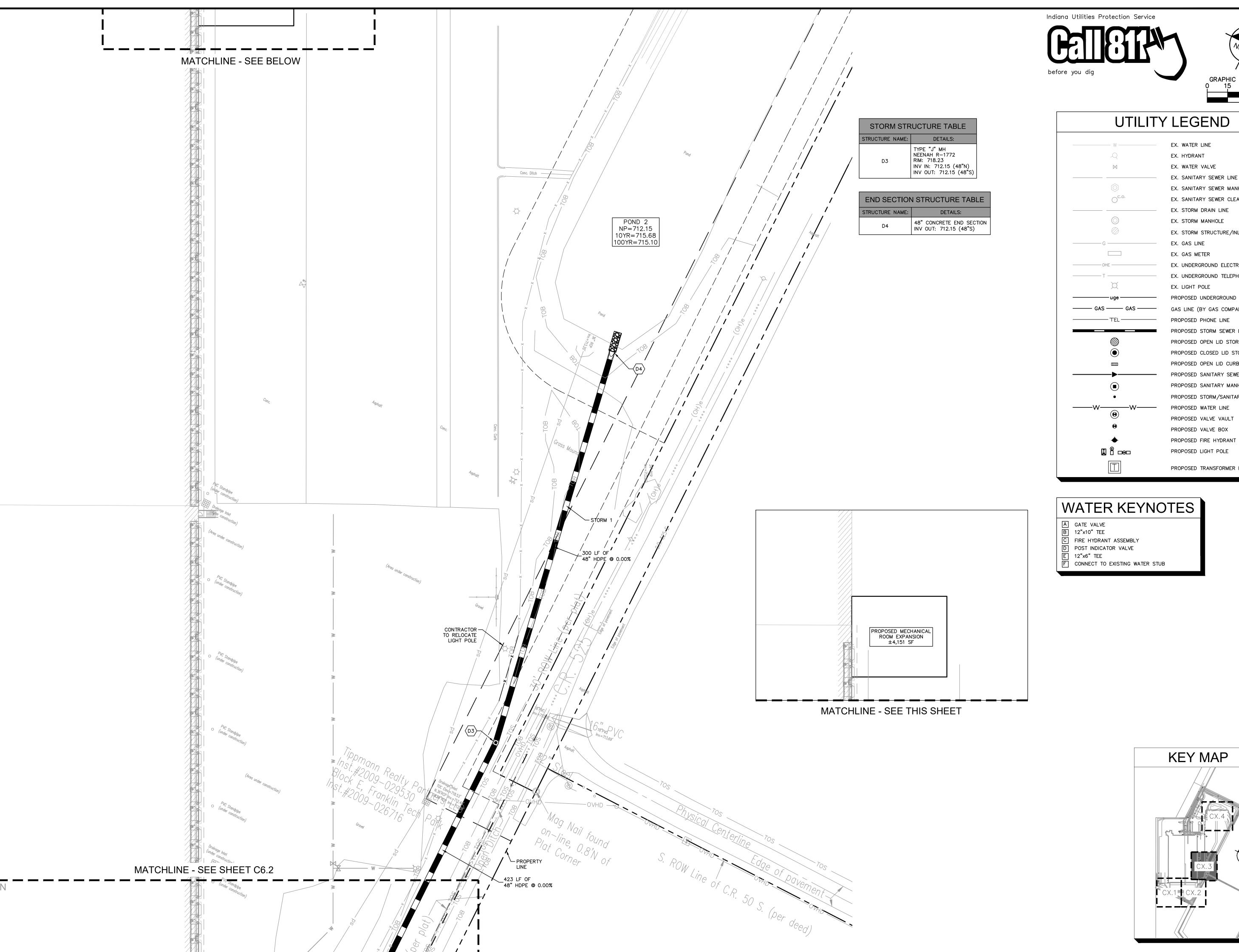
] 12"x6" TEE CONNECT TO EXISTING WATER STUB

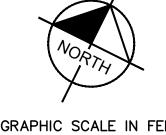




FRANKLIN IWI PHASE 7A EXPANSION

ORIGINAL ISSUE: 05/09/19 KHA PROJECT NO. 170021004 SHEET NUMBER





GRAPHIC SCALE IN FEET 0 15 30 60

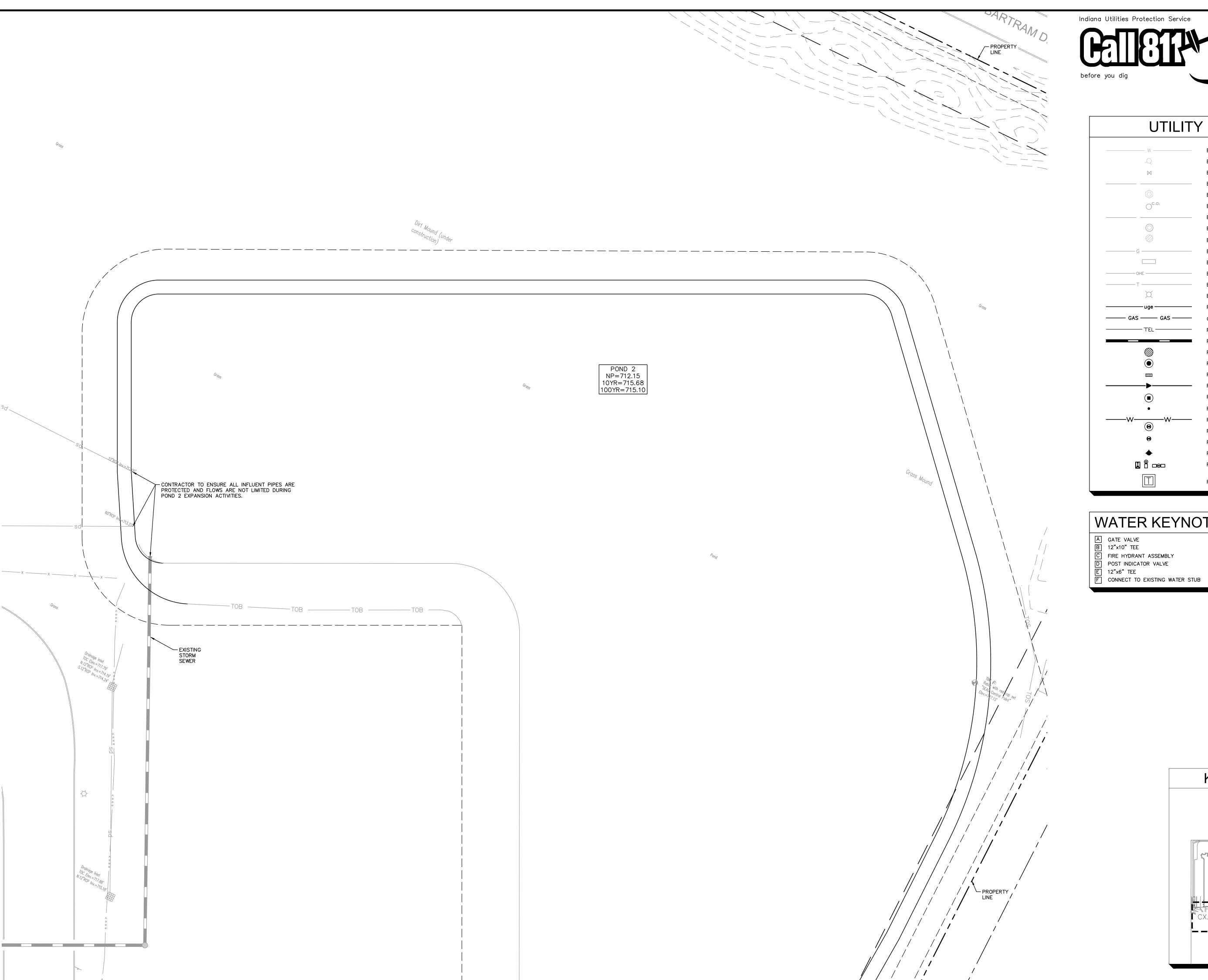
| ——— W ——— | EX. WATER LINE |
|--|--------------------------------------|
| Q | EX. HYDRANT |
| M | EX. WATER VALVE |
| | EX. SANITARY SEWER LINE |
| | EX. SANITARY SEWER MANHOLE |
| ⊙ ^{c.o.} | EX. SANITARY SEWER CLEANOUT |
| | EX. STORM DRAIN LINE |
| | EX. STORM MANHOLE |
| | EX. STORM STRUCTURE/INLET |
| G | EX. GAS LINE |
| | EX. GAS METER |
| OHE | EX. UNDERGROUND ELECTRIC LINE |
| ———Т | EX. UNDERGROUND TELEPHONE LINE |
| Ø | EX. LIGHT POLE |
| uge | PROPOSED UNDERGROUND ELECTRIC LINE |
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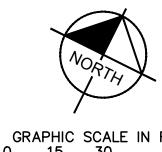
Kimley»Horn

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GRAPHIC SCALE IN FEET 0 15 30 60

UTILITY LEGEND

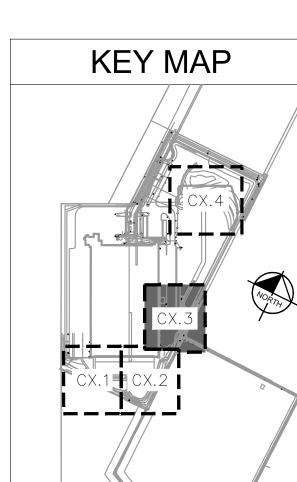
| W | EX. WATER LINE |
|--------------------|--------------------------------------|
| Q | EX. HYDRANT |
| \bowtie | EX. WATER VALVE |
| | EX. SANITARY SEWER LINE |
| | EX. SANITARY SEWER MANHOLE |
| O _{C.0} , | EX. SANITARY SEWER CLEANOUT |
| | EX. STORM DRAIN LINE |
| | EX. STORM MANHOLE |
| | EX. STORM STRUCTURE/INLET |
| G | EX. GAS LINE |
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| т | EX. UNDERGROUND TELEPHONE LINE |
| X | EX. LIGHT POLE |
| uge | PROPOSED UNDERGROUND ELECTRIC LINE |
| ——— GAS ——— | GAS LINE (BY GAS COMPANY) |
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| | PROPOSED STORM SEWER LINE |
| | PROPOSED OPEN LID STORM STRUCTURE |
| | PROPOSED CLOSED LID STORM STRUCTURE |
| | PROPOSED OPEN LID CURB STRUCTURE |
| | PROPOSED SANITARY SEWER LINE |
| | PROPOSED SANITARY MANHOLE |
| • | PROPOSED STORM/SANITARY CLEANOUT |
| ——W———W—— | PROPOSED WATER LINE |
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| | PROPOSED LIGHT POLE |
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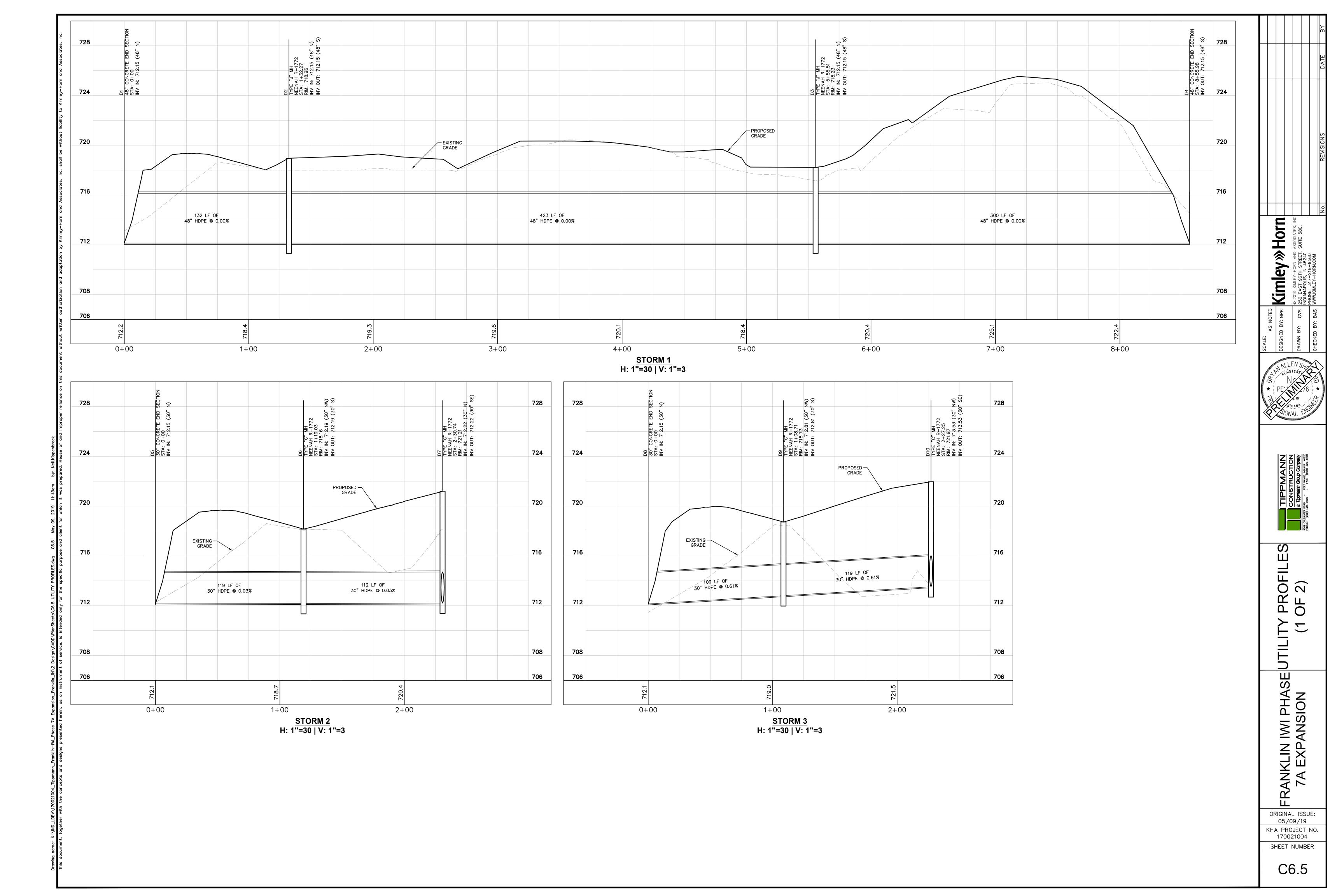
WATER KEYNOTES

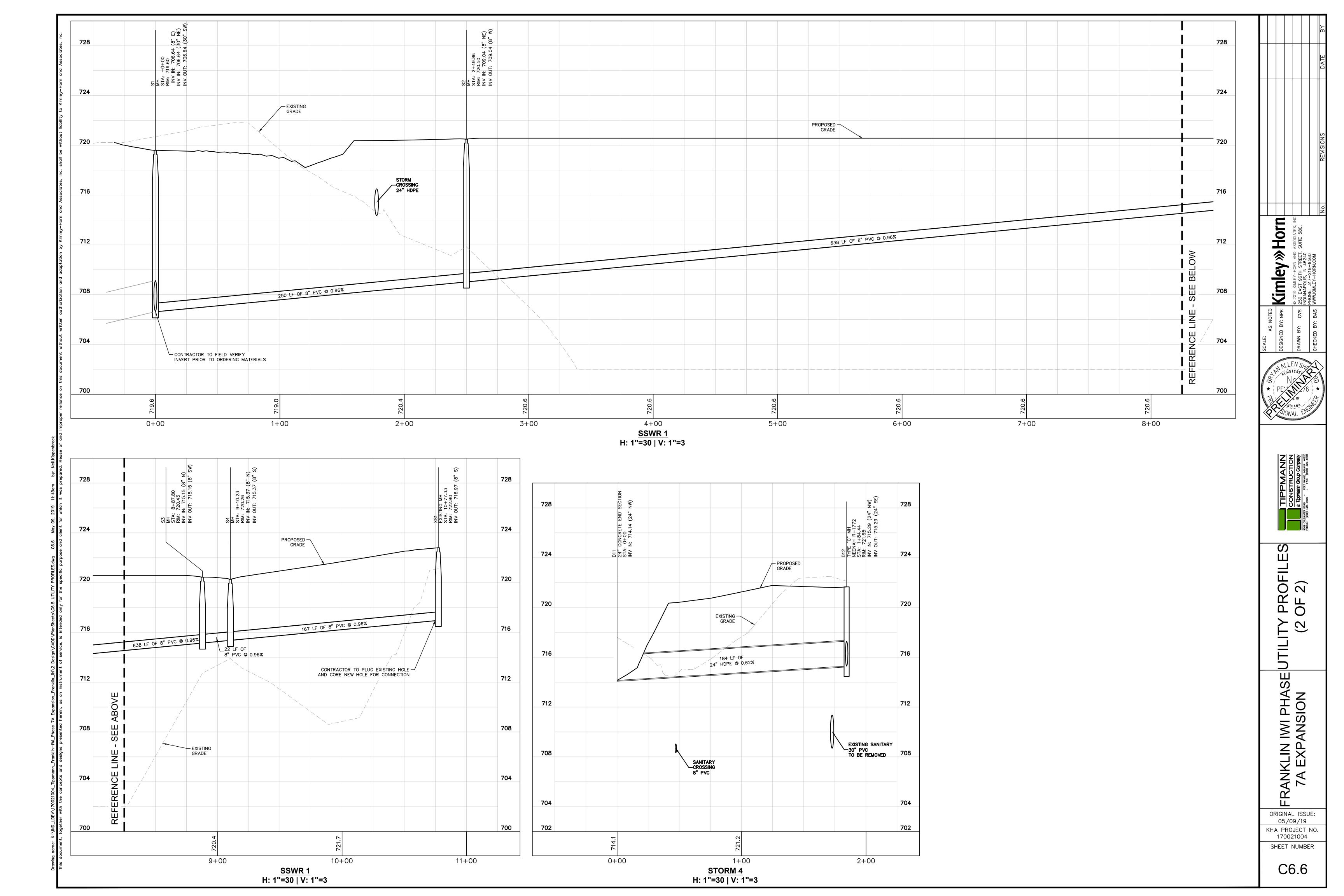
FRANKLIN IWI PHASE 7A EXPANSION

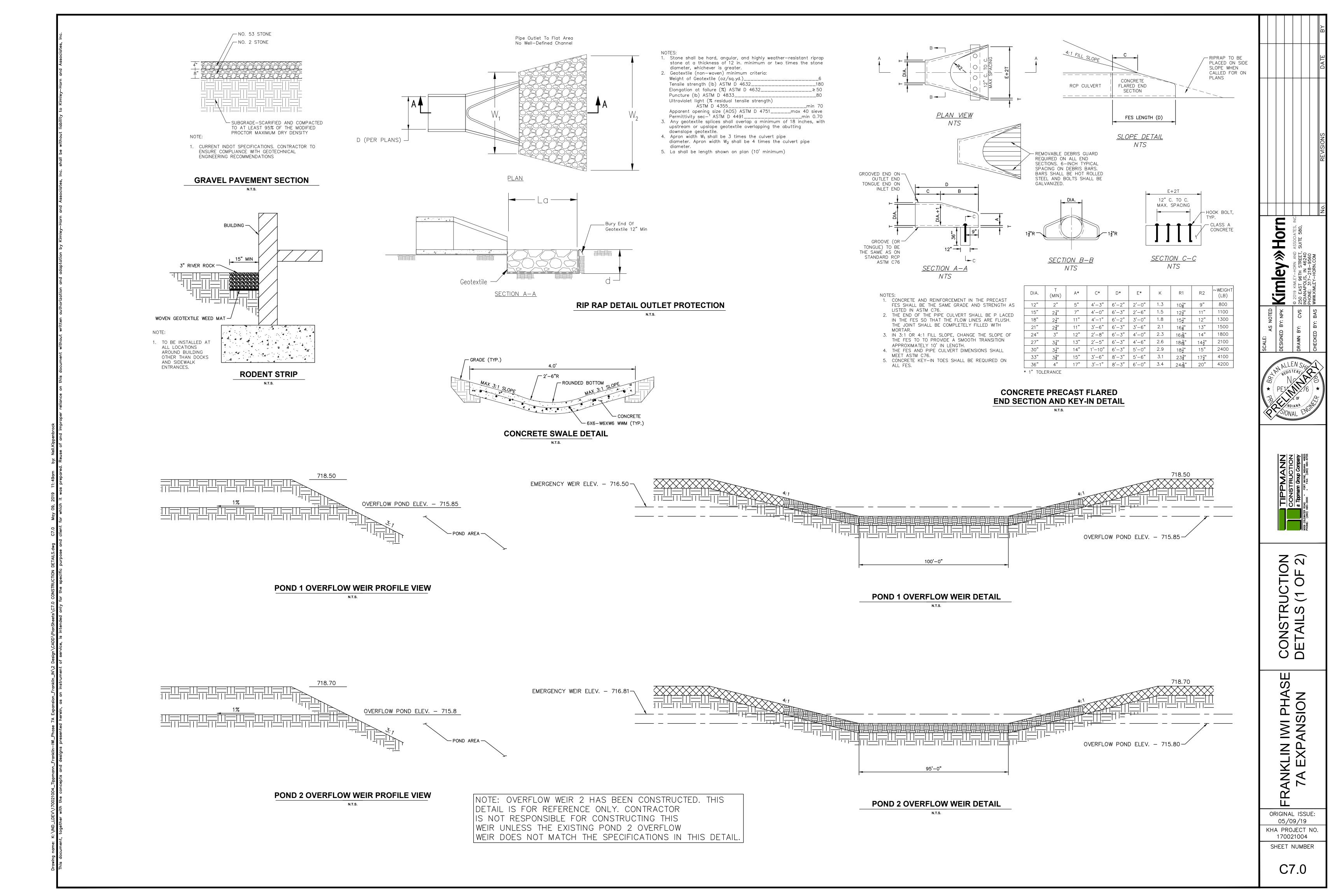
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CITY OF FRANKLIN - STANDARD SPECIFICATIONS

6" MIN. Bc 6" MIN. —HAUNCHING (Bc\2) _THE_LARGER_OF Bc/4 OR 4" HAND TAMPED OR WALKED IN #8 CRUSHED STONE PLACED IN LAYERS TO 12" OVER THE TOP OF PIPE.

W = MAXIMUM ALLOWABLE TRENCH WIDTH FOR PIPE AS PER ASTM NOT TO EXCEED FOUR (4) FEET FOR 6" THROUGH 24" PIPE NOR SIX (6) FEET FOR 27" THROUGH 48" PIPE D = PIPE DIAMETER (INTERNAL)
Bc = PIPE DIAMETER (EXTERNAL)

1. BEDDING STOPS AT A POINT 12" ABOVE THE TOP OF THE PIPE. BACKFILLING ABOVE THIS POINT SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS. WORK FALLING UNDER THE JURISDICTION OF THE INDIANA STATE HIGHWAY COMMISSION SHALL UTILIZE COMPACTED GRANULAR BACKFILL MATERIAL FOR INITIAL AND FINAL BACKFILL ANYWHERE WITHIN 12 FEET OF THE EDGE OF

PAVEMENT. OTHERWISE, COMPACTED GRANULAR BACKFILL MATERIAL SHALL ONLY BE USED UNDER PAVEMENT SURFACES OR OTHER SPECIFICALLY

FIRST CLASS PIPE LAYING METHOD FOR: 1) FLEXIBLE (PVC, RPVC, ABS & HDPE PIPE) AND 2) DUCTILE IRON WITHIN PVM'T LIMITS CITY of FRANKLIN, INDIANA

> **DPW** FIGURE

Illustration 7-1

FINISHED GRADE (SLOPE TO PREVENT STORM DRAINAGE FROM (SET FLUSH WITH FINISHED SURFACE UNLESS NOTED CHIMNEY SEAL (SEE DETAIL) MAXIMUM 12" LEVELING RINGS PRECAST CONC. ECCENTRIC CONE @ 16" O.C. PRECAST CONC. RISER PER BOTTOM PRECAST RISER ASTM C-478 NOTCHED AT FACTORY TO ACCOMODATE EXIST. SEWER — GASKETED JOINT (TYP.) ASTM C-443 TRIMIE CONCRETE AROUND MANHOLE EXCAVATION
(MIN. CONCRETE STRENGTH
OF 2500 PSI) EXISTING SEWER LINE - CONCRETE BENCH TO BE FORMED PRIOR TO REMOVING SEWER LINE CROWN - SLOP 1" PER FOOT TO WALL, BENC HEIGHT EQUAL TO 0.8 PIPE DIAMETER (MINIMUM CONCRETI STRENGTH OF 2500 PSI) PROVIDE ADEQUATE PIPE -SUPPORT DURING CONSTRUCTION TO PREVENT PIPE DAMAGE FILL WITH NON-SHRINK TYPE GROUT PRECAST OR POURED CONCRETE BASE PLACED ON 6" COMPACTED STONE MATERIAL (MIN. CONCRETE 1. FOR ALL MANHOLES 6'-O" OR LESS
IN DEPTH - PROVIDE RISER WITH FLAT
TOP IN LIEU OF ECCENTRIC CONE IN STRENGTH OF 3000 PSI) -ACCORDANCE WITH ASTM C-478 2. DROP MANHOLES SHALL BE USED WHENEVER THE DISTANCE FROM THE INFLUENT PIPE INVERT TO THE MANHOLE INVERT EXCEEDS 2'-0" PRECAST MANHOLE ADDED OVER EXISTING SEWER CITY of FRANKLIN, INDIANA FIGURE

Illustration 5-2

CITY OF FRANKLIN - STANDARD SPECIFICATIONS

Precast manhole section -

Cast iron manhole steps

Class A concrete

#4 e 6" c. to c. both ways

EXISTING MANHOLE OPENING TO BE FILLED WITH 2 "O" RING GASKETS AND NON-SHRINK GROUT PROPOSED SANITARY SEWER TYPICAL EXISTING MANHOLE ENTRY DETAIL CITY of FRANKLIN, INDIANA **DPW** FIGURE

Illustration 5-5

/s/ Anthony L. Uremovich 11-15-99
DESIGN STANDARDS ENGINEER DATE

/s/ /VDIANT-CHIEF HIGHWAY ENGINEER DATE

N STANDARDS ENGINEER ORGANALLY APPROVED 9-02-97

CITY OF FRANKLIN - STANDARD SPECIFICATIONS

(2) CONCEALED PICKHOLES PER NF-9104-A 22 3/4" LID: EAST JORDAN 1875 AVH FRAME: EAST JORDAN NOTE: METAL: CAST GRAY IRON ASTM A-48 CL.358 1875-22 FINISH: NOT PAINTED STANDARD FRAME AND LID CITY of FRANKLIN, INDIANA **DPW** FIGURE

_____ 2" HIGH RAISED LETTERS (TYP.)

Illustration 5-8

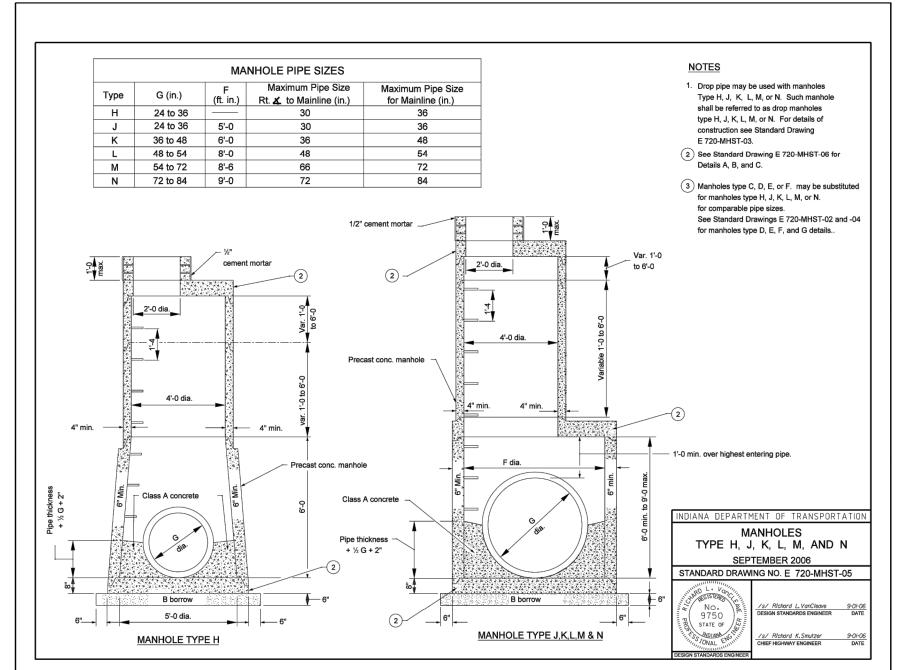
CITY OF FRANKLIN - STANDARD SPECIFICATIONS

GENERAL NOTES 1) For eccentric and concentric cone heights see cone heights table on Standard Drawing E 720-MHST-08. PLAN VIEW Eccentric cone, - concentric cone, or precast cover INDIANA DEPARTMENT OF TRANSPORTATION Cement mortar MANHOLE TYPE C SEPTEMBER 1997 STANDARD DRAWING NO.E 720-MHST-02 DETAILS PLACED IN THIS FORMAT 11-15-6" B borrow

(for precast bottom only)

└ Lift hook

1-34



1-37

CITY OF FRANKLIN - STANDARD SPECIFICATIONS

1-70

FRANKLIN IWI PHA 7A EXPANSION

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