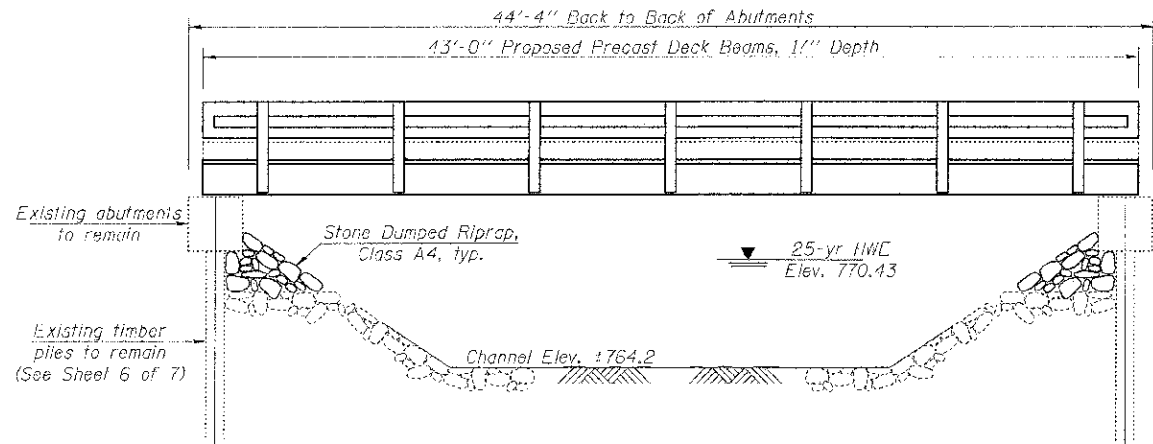


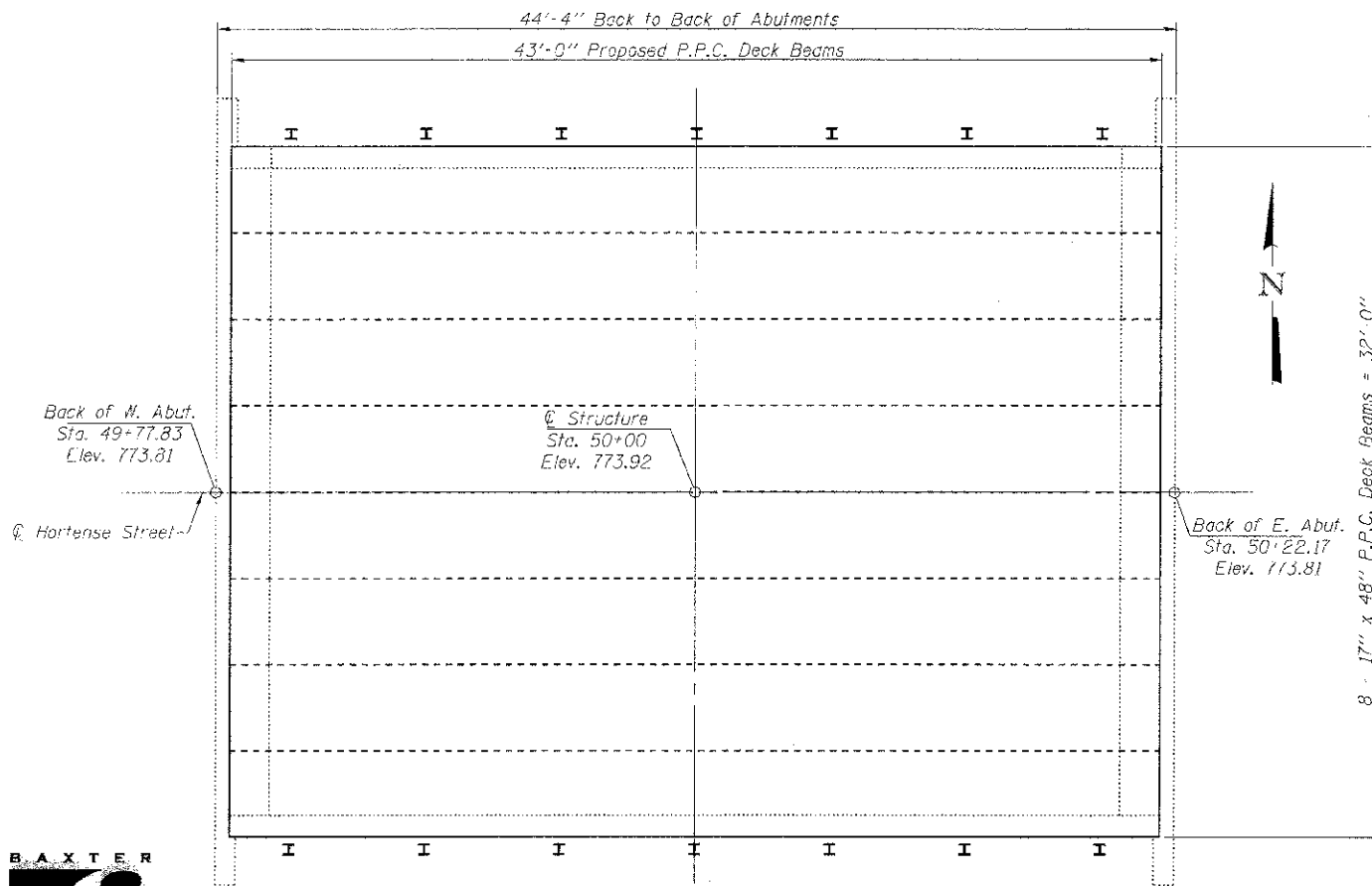
Benchmark: North arrow bonnet of fire hydrant at Northwest corner of Hortense Street and 6th Street. Elev. = 775.24

Existing Structure: SN 019-4002, built in 1969, the existing bridge is a single-span precast prestressed concrete deck beam superstructure supported by pile bent abutments and timber piles. The structure measures 44'-4" back to back of abutments, and 32'-0" out to out. Precast prestressed concrete deck beams to be removed and replaced. Existing abutments and piles to remain in place.

Salvage existing abutments.



ELEVATION



PLAN

DESIGN SPECIFICATIONS
2010 AASHTO LRFD Bridge Design Specifications with 2010 and 2011 Interims

LOADING HL-93
Alicw 50#/sq. ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

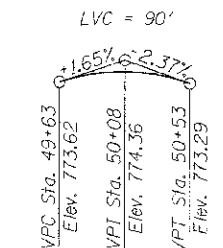
PRECAST PRESTRESSED UNITS
f'c = 6,000 psi
f'ci = 5,000 psi
fpu = 270,000 psi (Strands)
fpbt = 201,960 psi (Strands)

BULL RUN CREEK
RE-BUILT 2012 BY
VILLAGE OF KIRKLAND
DEKALB COUNTY
SEC. 10-00008-00-BR
STA. 50+00
STR. NO. 019-4002 LOADING HL-93

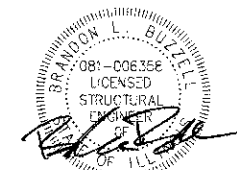
NAME PLATE
See Std. 515001

INDEX OF SHEETS

1. General Plan
2. Superstructure
3. 17" x 48" PPC Deck Beam
4. 17" x 48" PPC Deck Beam Details
5. Steel Railing, Type SM
6. Substructure Repairs
7. Concrete Repair Details



PROFILE GRADE
Along @ Structure



DATE: 5/23/12
LICENSE EXPIRES 11/30/12

I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with the requirements of the current AASHTO LRFD Bridge Design Specifications.

GENERAL NOTES:

- Reinforcement bars designated (E) shall be epoxy coated.
- Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- Protective coat shall not be applied to surfaces in which Waterproofing Membrane System is applied.
- Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with Name Plates.
- Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Structural Repair of Concrete.
- HMA Surface Course on bridge shall be built in accordance with Section 582 of the Standard Specifications unless directed otherwise by the Engineer.

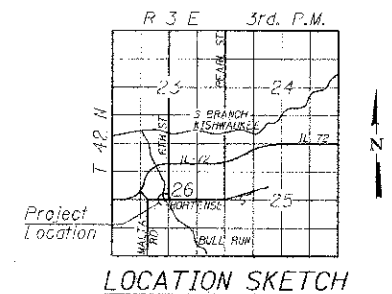
TOTAL BILL OF MATERIAL

| ITEM | UNIT | SUPER | SUB | TOTAL |
|--|--------|-------|-----|-------|
| Stone Dumped Riprap, Class A4 | Ton | | 80 | 80 |
| Haf-Mix Asphalt Surface Course, Mix "C", N50 | Ton | 20 | | 20 |
| Removal of Existing Superstructures | Each | 1 | | 1 |
| Structure Excavation | Cu Yd | | 43 | 43 |
| Concrete Encasement | Cu Yd | | 0.7 | 0.7 |
| Reinforcement Bars, Epoxy Coated | Pound | | 50 | 50 |
| Precast Prestressed Concrete Deck Beams (17" Depth) | Sq Ft | 1,376 | | 1,376 |
| Steel Railing, Type SM | Foot | 86 | | 86 |
| Name Plates | Each | 1 | | 1 |
| Waterproofing Membrane System | Sq Yd | 153 | | 153 |
| Portland Cement Mortar Fairing Course | Foot | 301 | | 301 |
| Fiber Wrap | Sq Ft | | 250 | 250 |
| Porous Granular Embankment, Special | Cu Yd | | 100 | 100 |
| Structural Repair of Concrete (Depth Equal To Or Less Than 5 Inches) | Sq Ft | | 100 | 100 |
| Treated Timber | F.B.M. | | 200 | 200 |

WATERWAY INFORMATION

Drainage Area = 2624 Acres Low Grade Elev. 773.00' @ Sta. 100' west of @

| Flood | Freq. Yr. | Q C.F.S. | Opening Sq. Ft. | | Nat. H.W.L. | Head - Ft. | | Headwater El. | |
|-------------|-----------|----------|-----------------|-------|-------------|------------|-------|---------------|--------|
| | | | Exist. | Prop. | | Exist. | Prop. | Exist. | Prop. |
| Design | 10 | 498 | 112.0 | 112.0 | 769.96 | 0.01 | 0.01 | 769.97 | 769.97 |
| Base | 25 | 642 | 129.0 | 129.0 | 770.43 | 0.08 | 0.08 | 770.51 | 770.51 |
| Overtopping | 100 | 855 | 148.0 | 148.0 | 771.03 | 0.20 | 0.20 | 771.23 | 771.23 |
| Max. Calc. | 500 | 1110 | 165.0 | 165.0 | 771.54 | 0.53 | 0.53 | 772.07 | 772.07 |



GENERAL PLAN
HORTENSE STREET OVER BULL RUN
SEC. 10-00008-00-BR
DEKALB COUNTY
STATION 50+00
STRUCTURE NO. 019-4002

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| FILE NAME | USER NAME | DESIGNED AS | REVISED |
|-----------|-----------|-------------|---------|
| | | CHECKED BAB | REVISED |
| | | DRAWN BCD | REVISED |
| | | CHECKED BLB | REVISED |

VILLAGE OF KIRKLAND
HORTENSE ST BRIDGE OVER
BULL RUN CREEK

GENERAL PLAN
STRUCTURE NO. 019-4002
SHEET NO. 1 OF 7 SHEETS

| MUN. ST. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|----------|----------------|--------|--------------|-----------|
| 1090 | 10-00008-00-BR | DEKALB | 20 | 10 |

CONTRACT NO. 87532
FED. ROAD DIST. NO. 3 BILLING: FED. AID PROJECT RFP-0310430